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Ask for:
Date: 5 December 2018

Dear Member

COUNTY COUNCIL - THURSDAY, 13 DECEMBER 2018

ITEM 10 - KENT MINERALS AND WASTE LOCAL PLAN 2013 – 2030 - EARLY PARTIAL REVIEW, KENT MINERAL SITES PLAN AND REVISED LOCAL DEVELOPMENT SCHEME

APPENDICES - (Pages 3 - 604)

Given the size of these appendices they have been published on the County Councils website alongside the [agenda](#) and are available via the modern.gov app. A hard copy of all the appendices is available in the Member's Room, the 3 Group Offices and on request from Members Desk (members.desk@kent.gov.uk).

Yours sincerely

A handwritten signature in black ink, appearing to read 'Ben Watts', is written over a faint circular stamp.

Benjamin Watts
General Counsel

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APPENDIX 1

Kent Minerals Sites Plan - Pre Submission Draft 2018

v2 December 2018

Kent Minerals Sites Plan - Pre Submission Draft 2018

An Invitation to Comment

The Kent Minerals and Waste Local Plan (KMWLP) was adopted in July 2016. It sets out the vision and objectives for Kent's minerals supply and waste management capacity from 2013 to 2030. It does not allocate specific sites suitable for minerals and waste development except for two strategic sites - one for cement production (and related mineral reserves) at Holborough in the Medway Valley and one for hazardous waste disposal at Norwood Quarry on the Isle of Sheppey.

A Mineral Sites Plan is being prepared to allocate specific sites within Kent suitable in principle for mineral extraction in accordance with policy CSM 2 of the KMWLP. Once adopted, the document will form part of the Development Plan for Kent, along with the KMWLP, District and Borough Local Plans and any Neighbourhood Plans

A 'Call for Sites' exercise was carried out between December 2016 and March 2017 which invited interested parties to submit details of sites that could meet the County's need for minerals. These were then assessed against an agreed phased methodology to determine which sites were suitable to be allocated in a Minerals Sites Plan and be subject to independent examination by an Inspector appointed by the Secretary of State. Following Initial Screening¹, 9 sites were identified as Mineral Site Options potential options. These 'Site Options'² were subject to public consultation in late 2017/early 2018. The views from this consultation³, along with further detailed technical assessment (DTA) work⁴, has informed which sites should be allocated for mineral development in the Mineral Sites Plan. The methodology for the Sites Plan work is set out in the Site Selection Methodology 2018.

This is the final stage in the preparation of the Mineral Sites Plan prior to the Plan's submission to the Secretary of State for examination. This document is the Pre-Submission Plan, published in accordance with Regulation 19 of the Town and Country Planning (Local Planning) (England) Regulations 2012. These documents are available for public inspection and representations are invited on the soundness and legality of the Plan in advance of submission to the Secretary of State for an Independent Examination in public. Ultimately the Inspector will report on the whether the Plan is 'sound' taking account of supporting evidence and representations received. A 'sound' Plan is one that is:

- 'Positively prepared';
- 'Justified';
- 'Effective'; and,
- Consistent with national policy.

The preparation of this Plan has involved considerable and ongoing engagement and collaboration with communities, local organisations and businesses. To ensure effective consideration of cross-boundary impacts that may be affected by the strategies and policies

¹ Screening was carried out in line with the County Councils Site Selection Methodology 2018.

² Kent Mineral Sites Plan Options Consultation September 2017.

³ See Options Consultation Report

⁴ See Kent Mineral Site Plan – Mineral Site Assessment 2018

in this Plan, it has also been prepared in cooperation with Kent's district and borough councils, neighbouring authorities and other Minerals and Waste Planning Authorities. This Plan is accompanied by a comprehensive evidence base including Habitats Regulations Assessment (HRA), a Sustainability Appraisal (SA) a Strategic Flood Risk Assessment (SFRA) and an Equalities Impact Assessment (EQIA).

The period for representations will run for xxxx weeks from xxxxx to xxxxx. The minimum statutory time period of six weeks has been extended to allow for the Christmas holiday.

You can make comments:

- Online at
- By email to mwlp@kent.gov.uk
- By post to: Kent County Council
Minerals and Waste Planning Policy
1st Floor, Invicta House
Maidstone
Kent
ME14 1XX

Kent Minerals Sites Plan - Pre Submission Draft 2018

Contents

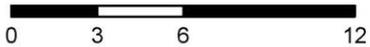
1. Introduction	5
2 The Policy Context	7
3 Provision of Mineral Sites	10
Sharp Sand and Gravel	10
Soft Sand	13
Appendix 1 - Kent Minerals Site Plan - Site Allocations	16
Sharp Sand	17
Extensions to Stonecastle Farm Quarry, Hadlow/Whetsted	17
Moat Farm, Capel, Tonbridge	20
Soft Sand	23
M3: Chapel Farm, Lenham (Western Site).....	23

1. Introduction

- 1.1. Kent County Council has responsibility for the planning of future mineral supply for the county. Following the adoption of the Kent Minerals and Waste Local Plan 2013-30 (KMWLP), this responsibility is being fulfilled by the preparation of a Kent Mineral Sites Plan (the Sites Plan). The plan area for this document is the administrative area of Kent, excluding Medway.
- 1.2. Kent contains a wide variety of mineral resources. Minerals are extracted for aggregate and non-aggregate markets. Aggregates are materials derived from sand and gravel deposits, soft (building) sands from the Folkestone Formation and crushed hard rock (Kentish Ragstone a limestone). They are used in the construction industry for building and maintenance purposes, including asphalt production in road building, concrete and mortar production for construction. Some aggregate minerals are also used for non-aggregate purposes, for example for beach feeding for flood defence purposes on parts of the coast line. Kent also has non-aggregate minerals, they include clay, brickearth, chalk (for construction/engineering and agricultural lime applications) and building stones (Kentish Ragstone, and extensive deposits of various sandstones that have been historically extracted). There also are reserves of industrial silica sand and brick clay within the county. However, the most significant minerals produced in the county are sharp sand and gravel, soft sand (building) and hard crushed rock (Kentish Ragstone).
- 1.3. The Sites Plan provides the spatial detail for meeting requirements for sharp sand and gravel and for soft sand in accordance with policy CSM2 of the Kent Minerals and Waste Local Plan 2013-30 which the authority adopted in July 2016, following an Independent Examination in 2015. The Sites Plan identifies potential locations for extraction of sharp sand and gravel and of soft sand, providing communities and the minerals industry with greater certainty about where minerals development may take place within Kent and the criteria that will need to be met.
- 1.4. Once adopted, the Kent Mineral Sites Plan will replace the currently saved Policy CA6 of the Kent Minerals and Waste Local Plan: Construction Aggregates 1993.
- 1.5. Once adopted, the Kent Mineral Sites Plan will replace the currently saved Policy B1 of the Kent Minerals Subject Plan: Brickearth 1986.



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Miles

Kent Minerals Sites Plan - Plan Area

Legend

-  District Boundaries
-  KCC



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2 The Policy Context

Kent Minerals and Waste Local Plan

- 2.1 The adopted Kent Minerals and Waste Local Plan 2013-30 (KMWLP) is part of the Development Plan for planning purposes. It sets out the overarching framework for the strategy and planning policies for sustainable minerals extraction, importation and recycling, and the management of all waste streams that are generated in Kent, together with their spatial implications. This includes consideration of the economic, social and environmental aspects of strategic minerals and waste planning within the county.
- 2.2 Chapter 3 of the KMWLP sets out the vision for mineral development in Kent and chapter 4 sets out 6 objectives to support this vision. Chapter 5 sets out the spatial strategy for meeting the need for minerals, identifying in general terms how much mineral will be provided over the Plan period and includes policies related to the delivery strategy for minerals (CSM policies) and Chapter 7 includes the development management policies (DM policies) which seeks to ensure that minerals development does not have unacceptable impacts.
- 2.3 Chapter 5 expects that the Mineral Sites Plan will develop the delivery strategy by allocating specific sites for mineral development in order to provide a level of certainty to local residents, the minerals industry, land owners and other interested stakeholders as to where minerals development is likely to take place.
- 2.4 Some work was previously undertaken on preparation of the Sites Plans that led to a Preferred Options Consultation (for waste and minerals) in May 2012. This work was not taken forward and to enable a more up-to-date appraisal of site suitability and deliverability it was considered necessary to undertake a second 'Call for Sites' exercise. This commenced in late 2016, continuing into 2017.
- 2.5 Policy CSM2 of the KMWLP sets out the policy context for the Supply of Land-won Minerals in Kent. It states that "Mineral working will be granted planning permission at sites identified in a Sites Plan, subject to meeting the requirements set out in the relevant site schedule in the Mineral Sites Plan and the Development Plan".

Preparation of the Minerals Sites Plan – Matters Considered

- 2.6 For a site to be allocated in the Sites Plan, Policy CSM2 requires site allocations to meet the following criteria:
 - There has to be a requirement for the mineral;
 - consistency with relevant development management criteria;
 - consistency with relevant policies in district local and neighbourhood plans;
 - assessment based on strategic environmental information and Habitat Regulation Assessment;
 - Deliverability; and
 - consistency with other relevant national planning policy and guidance.

- 2.7 In addition, the policy states that sites will generally be where viable mineral resources are known to exist, where landowners are supportive of mineral development taking place and where the Mineral Planning Authority considers that planning applications are likely to be acceptable in principle in planning terms. Discussion of some of the matters to be taken into account when preparing the Mineral Sites Plan is set out below
- 2.8 District and Borough Councils in Kent are preparing their own Local Plans. Care has been taken to avoid any material conflict between the Mineral Sites Plan and adopted Local Plans through consultation and engagement during the Local Plan formulation process. Local Plans produced by the County Council and the District and Borough Councils, along with any Neighbourhood Plans form the Development Plan.
- 2.9 Local District and Borough council input has been sought on the site selection process. The outcomes of meetings held with each local council fed into the overall site screening process, and their comments were again sought prior to detailed technical assessments being undertaken on the Site Options
- 2.10 Minerals and Waste Local Plans have been adopted and are also being prepared by the minerals and waste planning authorities bordering the Sites Plan area and these have been taken into account. In accordance with the Duty to Cooperate, there has been ongoing discussion and consultation with neighbouring mineral planning authorities, especially those within the South East Region in respect of need considerations. The County Council is a member of the South East Aggregate Working Party, which represents the Mineral Planning Authorities in the South East and industry representatives. The work of this Group has also informed the Sites Plan work. The County Council will continue to work closely with adjoining authorities on strategic cross boundary matters.
- 2.11 In accordance with the requirements of the Habitats Directive 1992, the Site Plan has been subject to Habitats Regulations Assessment (HRA). This work has helped to inform which sites should be included for allocation within the Site Plan. Related consultation has taken place with Natural England regarding the impact on international designations. Full details of the HRA assessment are available on the Council's website.
- 2.12 Post publication of the Site Options for consultation at Regulation 18 stage, the County Council attended a number of public meeting hosted by Parish and Town Councils to explain the Site Plan work and seek views on the proposals. The views received have informed the Site Plan work.
- 2.13 The Planning and Compulsory Purchase Act 2004 sets out the legislative framework for the preparation of Local Plans whilst European and National policies and strategies provide guidance on their content. The Minerals Sites Plan must be consistent with European and National policies. This Pre-Submission Draft Mineral Sites Plan has been produced within the context of relevant Plans, Programmes and Directives which were also instrumental in shaping the Minerals Strategy 2014. The Sites Plan has also been prepared in accordance with the National Planning Policy Framework (NPPF) 2018 and National Planning Practice Guidance (NPPG) 2014 for Minerals.

- 2.14 **It should be noted that the site allocations do not equate to the grant of planning permission. Any proposal for the development of an allocated site will need to secure planning consent, and satisfy the requirements of the development plan and planning policy considerations at that time.**
- 2.15 Development of the allocations of the Mineral Sites Plan, and any other mineral developments, are subject to all the relevant policies, particularly the development management policies of the Kent Minerals and Waste Local Plan 2013-30, along with other local plans and relevant national policies.

3 Provision of Mineral Sites

- 3.1 The Mineral Sites Plan proposes sites for the extraction of soft sand, and sharp sand and gravel. It is considered that these allocations, in conjunction with current permitted reserves and the criteria based approach to the provision of aggregates established in Policy CSM2 of the adopted KMWLP, will provide sufficient minerals during the Minerals Sites Plan period for the identified soft sand requirements and make an effective contribution to the supply of land-won sharp sand and gravel.

Sharp Sand and Gravel

- 3.2 Policy CSM 2 of the adopted Kent Minerals and Waste Local Plan 2013-30, in compliance with national policy, commits the County Council to make provision for at least a 7 year landbank for land-won sharp sands and gravel based on the current agreed local annual supply requirement for Kent while resources allow.
- 3.3 The local annual supply requirement is established annually through the Local Aggregates Assessment (LAA) process, and has been taken as the average of the previous 10 years of sales and projected over the anticipated Mineral Sites Plan Period (2019-2030) including provision for an at least 7 year landbank to be available at the end of this Plan period.

The supply of locally extracted sand and gravel will be sourced from:

- Existing permitted sites
 - New sites, including extensions, as identified in the Mineral Sites Plan, and
 - Other new sites not identified in the Mineral Sites Plan, deemed as acceptable sustainable mineral development in accordance with local planning policy and all material planning considerations including national planning policy
- 3.4 Based on 2014 data, the KMWLP identified a required provision over the life of the plan period of 10.8mt of sharp sands and gravel and at least 7 years supply (5.46mt). Since this time, permitted reserves have increased (due to current reserves being re-estimated), and the 10 year sales average has decreased. Therefore, a new requirement⁵ has been calculated as shown in Figure 1.

⁵ See Sharp Sand and Gravel Topic Paper 2018

Figure 1 - Revised Sharp Sand and Gravel Site Plan Requirements

10 year average figure x Years covered by the Plan (18 years, 2019 to 2030 plus 7 year landbank) - Existing Permitted Reserves (estimated when Plan starts in our case 2019) = Requirement tonnage to be provided over the Plan period

Estimated permitted reserves have been calculated as follows:

Reserves as of end of 2017 = 3.69
Current 10-year sales average=0.472mt

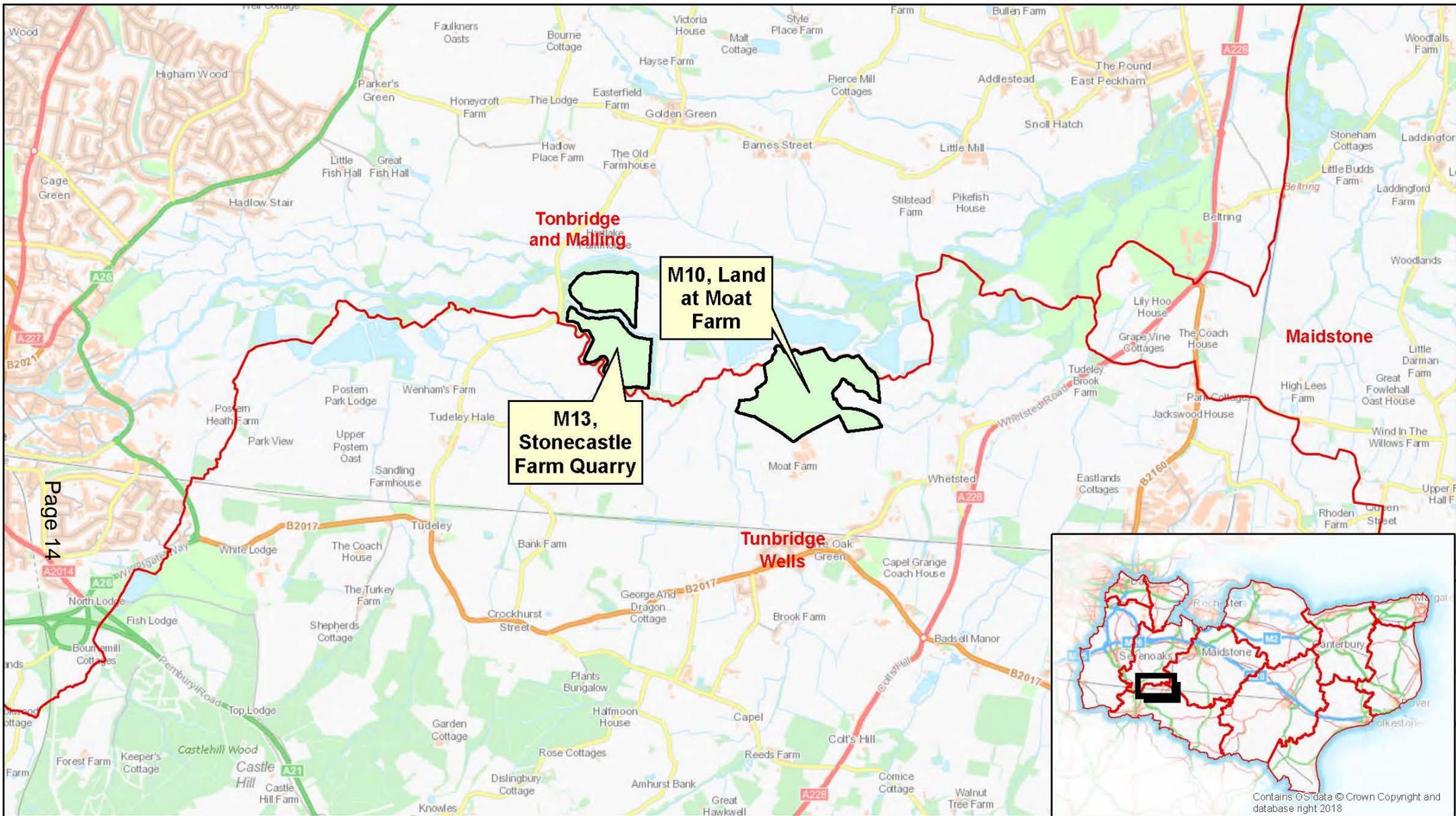
Available reserves by the end 2019 would be reduced by 2 years equivalent extraction (during 2018 and 2019 at the current 10-year sales average rate)

Available reserves at end 2019 = 3.69mt minus (2 x 0.472mt) = 2.746 mt

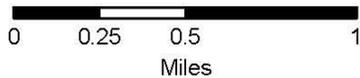
Therefore:

$(0.472 \times 18) - 2.746 = 5.75\text{mt overall Plan requirement}$

- 3.5 Having assessed the sharp sand and gravel sites that were promoted through the 'call for sites' in accordance with planning policy, two sites are allocated to contribute to the steady and adequate supply of sharp sands and gravel, subject to demonstrating at planning application stage compliance with the development management criteria set out below and national and local planning policy:
- **Stonecastle Farm Quarry Extensions, Hadlow (M13)** – an extension to the existing quarry (total yield of 1,000,000 tonnes), and
 - **Land at Moat Farm, Five Oak Green (M10)** - a proposed new quarry (total yield of 1,500,000 tonnes)
- 3.6 Details of the sites and the development criteria are shown on the map Kent Minerals Sites Plan – Sharp Sand and Gravels and in Appendix 1.
- 3.7 The total yield of the sites suitable for allocation is 2.5mt. This results in a deficit of 3.25mt over the Plan period. Therefore, Kent will continue to be increasingly dependent on alternative sources to meet the demand for sharp sand and gravel. This will likely entail increased importation of sand and gravel via wharves and railheads, mainly from marine dredged materials from the East English Channel and North Sea (see LAA2018). Railheads may further distribute this material and may also have some potential to introduce land-won supply from other areas. Recycled and secondary aggregates will also contribute to overall aggregate needs but cannot be used as a substitute for all applications and is seen as making a contribution to overall supply compared to primary aggregates.
- 3.8 Any proposal for the development of either of the above allocations must address the development management considerations set out for each site in Appendix 1, in addition to any other matters relevant to the development of each proposed allocation demonstrating that any unacceptable impacts will be mitigated to the satisfaction of the Mineral Planning Authority.



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Kent Minerals Sites Plan - Sharp Sand and Gravels

Legend

-  KCC
-  District Boundaries



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Soft Sand

3.9 Policy CSM 2 of the adopted Kent Minerals and Waste Local Plan 2013-30, in compliance with national policy, commits the County Council to make the provision of at least a 7-year landbank for soft sand based on the current agreed local annual supply requirement for Kent.

3.10 The local annual supply requirement is established annually through the Local Aggregates Assessment (LAA) process, and has been taken as the average of the previous 10-years of sales and projected over the anticipated Mineral Sites Plan Period (2019-2030) including provision for an at least 7-year landbank to be available at the end of this Plan period

3.11 The supply of locally extracted soft sand will be sourced from:

- Existing permitted sites
- A new site, as identified in the Mineral Sites Plan, and
- Other new sites not identified in the Mineral Sites Plan, deemed as acceptable sustainable mineral development in accordance with local planning policy and all material planning considerations including national planning policy

3.12 Requirements in the adopted Kent Minerals and Waste Local Plan (KMWLP) suggest a 5 million tonne shortfall to be met from sites identified in the Kent Mineral Sites Plan. This shortfall was based on 2014 data and assumed the need to plan for a 24-year land bank, however, the Mineral Sites Plan period is shorter (the Plan period of 11 years (2019 to 30) plus 7 years at the end of the Plan period giving 18 years in total to plan for). More recent calculations based on data in the LAA2018 regarding supply in the form of sales and available reserves to meet that demand over the Plan period, taken together with an 18-year landbank suggest the shortfall is now 2.5mt⁶. See Figure 2.

⁶ See Soft Sand Topic Paper 2018

Figure 2 - Revised Soft Sand Site Plan Requirements

<p>10-year average figure x Years covered by the plan (18 years, 2019 to 2030 plus 7 year landbank) - Existing Permitted Reserves (estimated when the plan period commences in our case 2019) = Requirement tonnage to be provided over the Sites Plan period</p> <p>Estimated permitted reserves have been calculated as follows:</p> <p>Reserves as of end of 2017 = 8.85</p> <p>Available reserves by the end 2019 would be reduced by 2 years equivalent extraction (using the 10-year sales average of 0.568mt for 2018 and 2019 extraction)</p> <p>Available reserves at end 2019 = 8.85 - (2 x 0.568mt) = 7.714mt</p> <p>Therefore:</p> <p>(0.568 x 18) – 7.714 = Overall Plan of 2.51mt requirement (rounded to 2.5mt)</p>
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3.13 Having assessed the soft sand sites that were promoted through the 'call for sites' in accordance with planning policy, one site is allocated to contribute to the steady and adequate supply of soft sand, subject to demonstrating at planning application stage compliance with the development management criteria set out below and national and local planning policy:

- **Chapel Farm (West), Lenham (M3⁷)** – a proposed new quarry (total yield 3,200,000 tonnes)

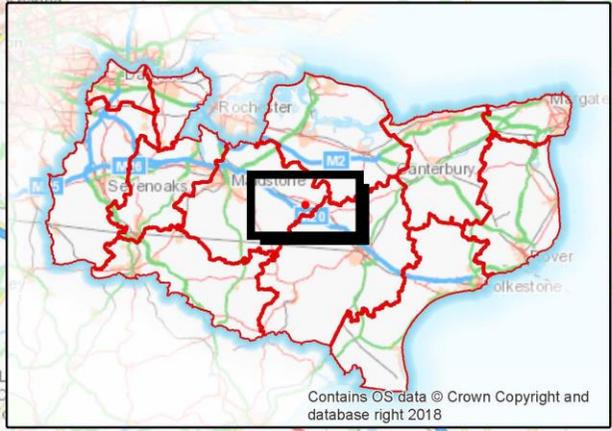
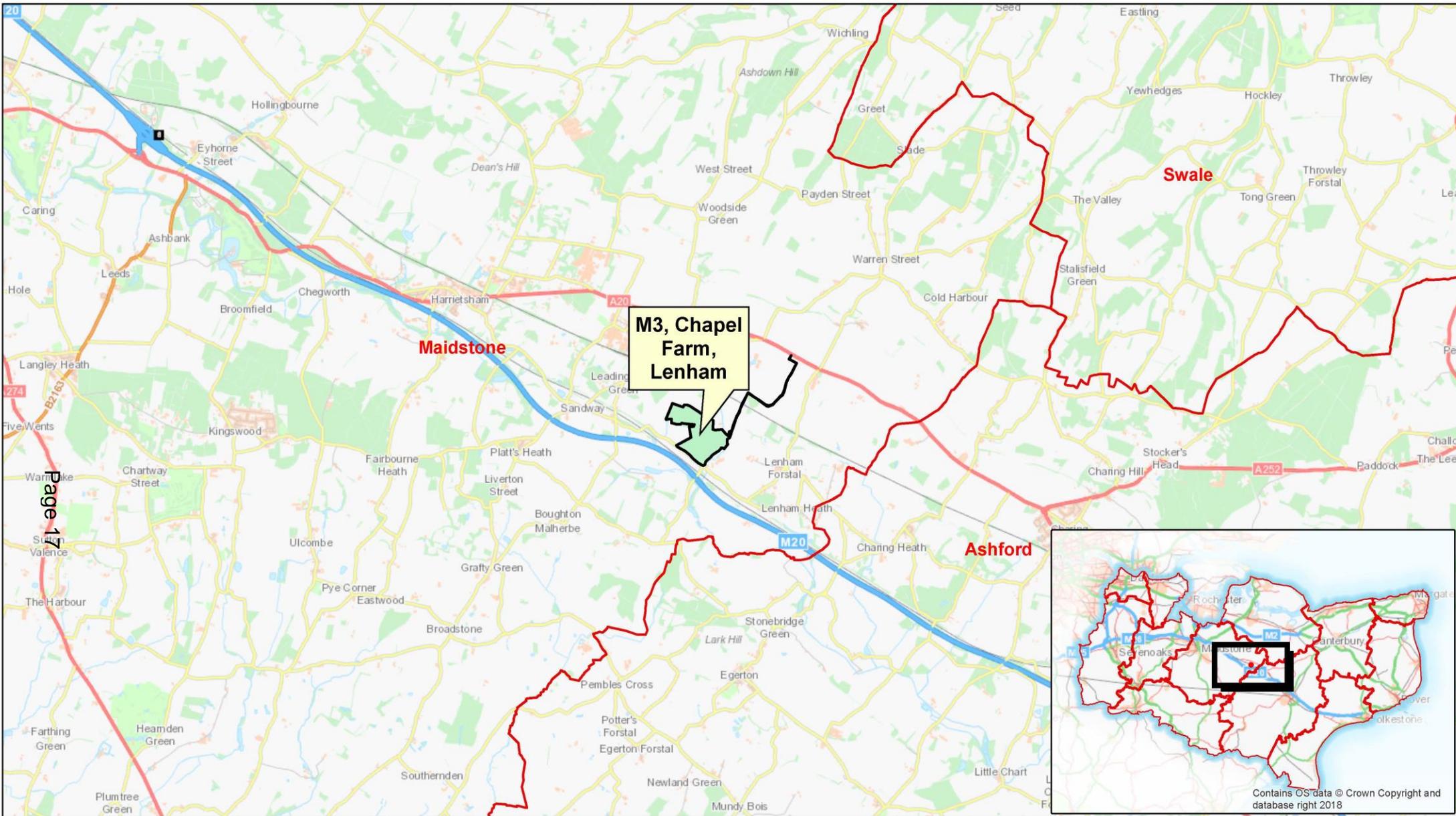
3.14 Details of the site and the development criteria are shown on the map Kent Minerals Sites Plan – Soft Sand and in Appendix 1.

3.15 Any proposal for the development of the above allocation must address the development management considerations set out for the site in Appendix 1, in addition to any other planning considerations relevant to the development and that any adverse impacts will be mitigated to the satisfaction of the Mineral Planning Authority.

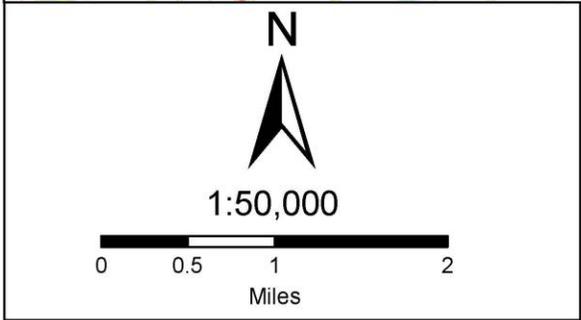
3.16 The yield of the Chapel Farm West site is 3.2mt. This amount can adequately meet the objectively assessed need for soft sand over the life of the Plan and will meet the requirement for a steady and adequate supply of soft sand in accordance with Policy CSM 2 of the KMWLP.

3.17 There will also be a surplus of 0.7mt of soft sand available to contribute to the wider regional need for this material.

⁷ As amended to exclude the eastern parcel 2018



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Kent Minerals Sites Plan - Soft Sand

- Legend**
- KCC
 - District Boundaries



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Appendix 1 - Kent Minerals Site Plan - Site Allocations

Background

This appendix contains the Development Management Criteria for each of the allocated mineral sites. These set out the key, site specific information relating to potential constraints, opportunities and issues to be addressed at the planning application stage.

The Kent Minerals Sites Plan is an integral part of, the KMWLP. The two documents should be read together, and the policies of the KMWLP, particularly the development management policies (Chapter 7) will be applied to proposals for development on sites allocated in the Kent Minerals Site Plan.

Development Management Criteria

The Development Management criteria are specific matters to be taken into account in relation to the development of each site. They also include guidance on restoration objectives. The information set out in criteria should not be considered as exhaustive. These criteria are based on an assessment of the sites at the time this Plan was prepared and if circumstances change or new information becomes available prior to sites coming forward through a planning application, this will also need to be taken into account in decision making.

As a result of the issues set out in the Development Management Criteria, and depending on the precise nature of the development proposed, mitigation measures are likely to be required in order to prevent adverse impacts occurring. If adverse impacts are unavoidable and it is considered that they are an acceptable part of the development proposed, compensation measures may be required.

Sharp Sand

Extensions to Stonecastle Farm Quarry, Hadlow/Whetsted

Site Location: Hadlow, Tonbridge

Grid reference: Eastings 563335 Northings 146908

District/Borough Council: Tonbridge and Malling (Access is within Tunbridge Wells)

Parish: Hadlow

Site Area: 28 hectares

Estimated Mineral Reserve: 1,000,000 tonnes

Existing Land Use: Agriculture

Proposed Development: Extraction of sharp sands and gravel (Sub-alluvial River Terrace Deposits)

Proposed Restoration: Reedbeds and lakes

Development Management Criteria:

The Stonecastle Farm Quarry Extension site is acceptable in principle for mineral development, subject to compliance with the development management considerations, with particular reference to:

Transport

- A detailed transport assessment to demonstrate compliance with KMWLP Policy DM13.
- All quarry traffic to utilise the existing Stonecastle Quarry access onto Whetsted Road, and only turn left when exiting the site.
- The site shall only be worked sequentially to the permitted phases at Stonecastle Farm Quarry or the Moat Farm Quarry (should planning permission be granted for this latter site). To avoid unacceptable impacts on the local highway network, the Stonecastle Farm Extension (M13), the Moat Farm Site (M10) and the permitted Stonecastle Farm Quarry shall not be worked concurrently .

Water Resources

- A minimum 16 metre buffer will need to be provided between extraction and nearby watercourses.
- Demonstration that the site will have no adverse impacts on hydrology or hydrogeology. This should be undertaken in liaison with South East Water and the Environment Agency and will need to include (amongst other matters) the following:
 - The risk of pollutants entering the restored open lakes
 - A Hydrometric Monitoring Strategy; the results of this should be regularly reviewed and the conceptual model of the site updated as required

- Risk to derogation of the activities subject to Abstraction Licences in the vicinity of the site.
- Compliance with the Environment Agency's approach to the management and protection of groundwater as outlined within their Groundwater Protection Position Statements and take all measures and precautions necessary to avoid deterioration in the quality of groundwater below the site.
- The restoration plan will need to have reference to the proposed lakes and their interface with the nearby watercourses in accordance with Environment Agency advice. It must also include evidence to demonstrate how the integrity of nearby watercourses will be retained.
- The two abstraction licences within the vicinity of the site will need to be taken into account.
- Dewatering techniques must not be used that would impact local water resources.
- Any application will need to be accompanied by a detailed flood risk assessment.

Amenity

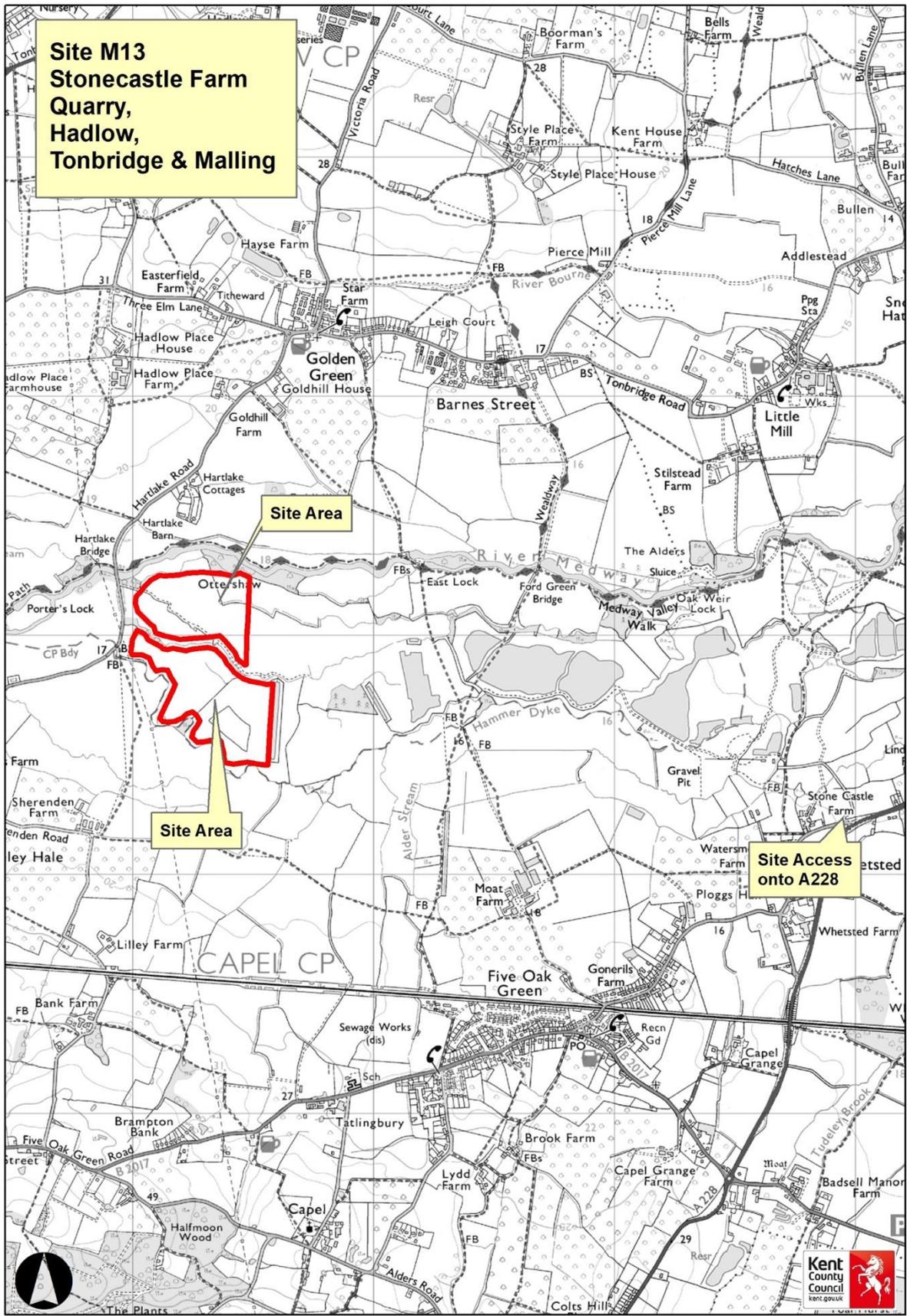
- A lighting, noise, dust and vibration management plan should be completed, setting out how unacceptable impacts will be avoided. A detailed dust assessment and management plan should be submitted which follows best practice and any national Government guidance (e.g. Planning Practice Guidance).
- Compliance with policy DM11 of the Kent Minerals and Waste Local Plan in respect of health and amenity.

Biodiversity

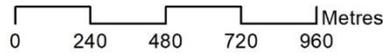
- A detailed ecological appraisal setting out any mitigation measures needed to ensure there are no unacceptable impacts on Kent's biodiversity assets
- Detailed restoration proposals will need to demonstrate that the potential loss of the BAP habitat deciduous woodland is offset by replacement woodland provision within the proposed restoration plan. This should include a range of trees and shrub sizes to create a vertical design element to the planting.
- Any operations should exclude the Ancient Woodland and a suitable buffer should be employed as to not impact on the designation directly or indirectly
- Restoration scheme should incorporate additional woodland planting where possible, including native evergreen species along the western and southern boundaries of the proposed quarry extension site.
- Suitable buffer zones and mitigation to be proposed to mitigate impacts to Local Wildlife Site TM20.
- The developer to appropriately manage the Nuttall's pondweed and Crassula in the area.
- The need for compensatory replacement habitat should be considered.

Heritage

- Further assessment of the potential impact of proposals on the historic landscape and surviving features is necessary and should account of the historic landscape should be taken during works and in later site landscaping and restoration programme.
- The impact of proposals upon the Listed Buildings should be fully assessed and mitigation measures undertaken to avoid impact on their setting.
- Any planning application should be accompanied by a full archaeological impact assessment to ascertain the extent of such remains.



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Moat Farm, Capel, Tonbridge

Site Location: Five Oak Green, Capel, Tonbridge

Grid reference: Eastings 564578 Northings 146400

District/Borough Council: Tonbridge and Malling

Parish: Capel

Site Area: 38.2 hectares

Estimated Mineral Reserve: 1,500,000 tonnes

Existing Land Use: Agriculture

Proposed Development: Extraction of sharp sands and gravel (Sub-alluvial River Terrace Deposits)

Proposed Restoration: Phased wetland restoration

Development Management Criteria:

The Moat Farm site is acceptable in principle for mineral development, subject to compliance with the development management considerations, with particular reference to:

Transport

- A detailed transport assessment to demonstrate compliance with KMWLP Policy DM13.
- Mineral must be removed from the site via the Stonecastle Farm site to the north such that access onto the highway network is achieved using the existing and approved access for the Stonecastle Farm Quarry.
- The site shall only be worked sequentially to the permitted phases at Stonecastle Farm Quarry or the Moat Farm Quarry (should planning permission be granted for this latter site).
- To avoid unacceptable impacts on the local highway network, the Stonecastle Farm Extension, the Moat Farm Site and the permitted Stonecastle Farm Quarry shall not be worked concurrently.
- Proposals for the diversion for PROW will be required which show how connectivity of the surrounding PROW network will not be lost.

Water Resources

- A 16 metre buffer should be provided between extraction and nearby watercourses to alleviate flood risk in the area. Furthermore, should the Alder Stream require diversion, this should be subject to EA approval and hydraulic modelling must be undertaken to inform the diversion route and the potential impact on flood risk elsewhere.
- Demonstration that the site will have no adverse impacts on hydrology or hydrogeology. This should be undertaken in liaison with South East Water and the Environment Agency

- Any restoration works should not include raising the ground levels over existing levels as this will have an adverse impact on flood risk. Wetland restoration is preferable.

Biodiversity

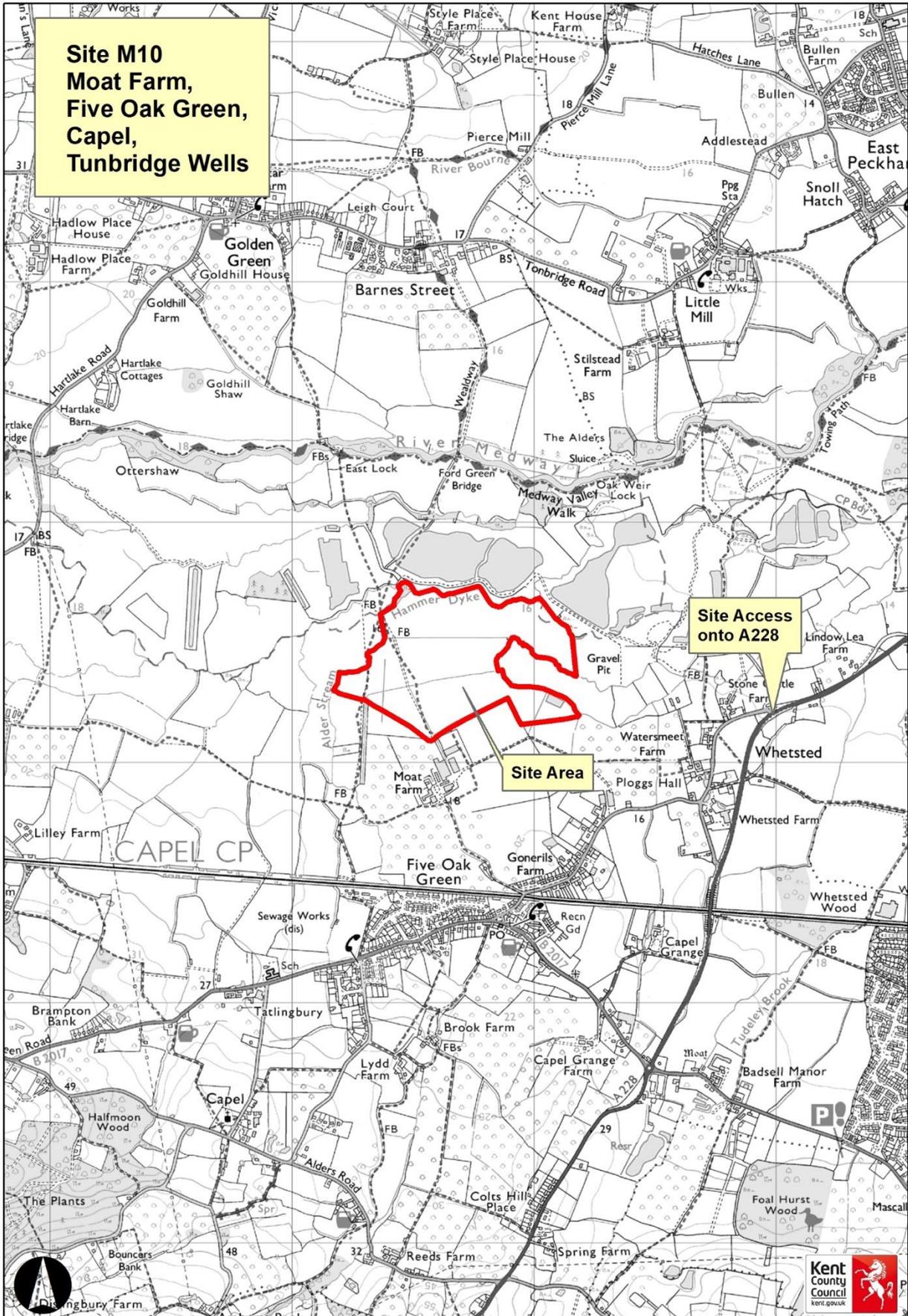
- Any proposal would need to be accompanied by a detailed ecological appraisal setting out any mitigation measures needed to ensure there are no unacceptable impacts on Kent's biodiversity assets
- Any operations should exclude the Ancient Woodland and a suitable buffer should be employed as to not impact on the designation directly or indirectly.

Health and Amenity

- Compliance with policy DM11 of the Kent Minerals and Waste Local Plan in respect of health and amenity.
- A lighting, noise, dust, and vibration management plan should be completed, setting out how unacceptable impacts will be avoided. A detailed dust assessment and management plan should be submitted which follows best practice and any national Government guidance (e.g. Planning Practice Guidance).

Heritage

- There is potential for Palaeolithic remains within the site. Therefore, any planning application should be accompanied by a full archaeological impact assessment to ascertain the extent of such remains.

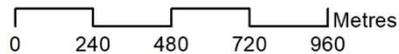


**Site M10
Moat Farm,
Five Oak Green,
Capel,
Tunbridge Wells**

**Site Access
onto A228**

Site Area

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Soft Sand

M3: Chapel Farm, Lenham (Western Site)

Site Location: Lenham, Maidstone

Grid reference: Eastings 590223 Northings 150704

District/Borough Council: Maidstone

Parish: Lenham

Site Area: 35.4 hectares

Estimated Mineral Reserve: 3,200,000 tonnes

Existing Land Use: Agriculture

Proposed Development: Extraction of soft sand (Sandstone: Folkestone Formation)

Proposed Restoration: Lower level agriculture

Development Management Criteria:

The Chapel Farm, Lenham (Western Site) (M10) is acceptable in principle for mineral development, subject to compliance with the development management considerations, with particular reference to:

Biodiversity

- At least a 15 metre buffer to be maintained around the Ancient Woodland at all times
- Lenham Quarry SSSI is approximately 800m from the site and Hart Hill SSSI is 2.5km away; both are designated for their geological interest. Lenham Heath & Chilston Park and Bull Heath Pit Local Wildlife Sites (LWS) are adjacent to the proposed site. Evidence to be submitted with any planning application to confirm that the LWS and SSSIs will not be adversely impacted
- Woodland copse to the north-west corner of the site must be maintained

Landscape

- Detailed information setting out proposed mitigation of visual impacts and demonstrating that the setting of the Kent Downs AONB will not be adversely impacted

Heritage

- Nearby listed buildings include Royton Manor (Grade II*) and Chapel Mill (II), Vine House (II) and Mount Castle Farm Cottage (II). Consideration and mitigation of impacts on heritage assets including listed buildings is required.

Water Resources

- Any application will need to be accompanied by an EIA with particular emphasis on the site's relationship and impact on the Great Stour;
- Appropriate mitigation measures and monitoring will need to be implemented as per the request of the Environment Agency, to demonstrate the following:
 - Hydraulic continuity between those reaches of the Great Stour and associated tributaries, if proven to be in part dependent on groundwater baseflow originating from the adjoining aquifer (Folkestone Formation).
 - The hydraulic integrity of the river is not compromised. In particular, the proposed plans will need to recognise the function of the foremost transient reaches of the Great Stour, which are dependent on both chalk escarpment seepage and surface runoff contributions, where underlain by Gault Clay to the immediate north of Chapel Farm. Any submission will need to account for this 'contribution', and the plans cannot allow the Great Stour to become hydraulically 'isolated' from its headwaters, irrespective of whether those watercourses are quantified as ephemeral.
 - The underlining Sandgate Formation is not compromised, especially if the Formation is shown to be acting as an aquiclude at Chapel Farm, and within the immediate vicinity. Such a response is required to protect the Hythe Formation, which is classified as a major water resources aquifer unit.

Transport and Access

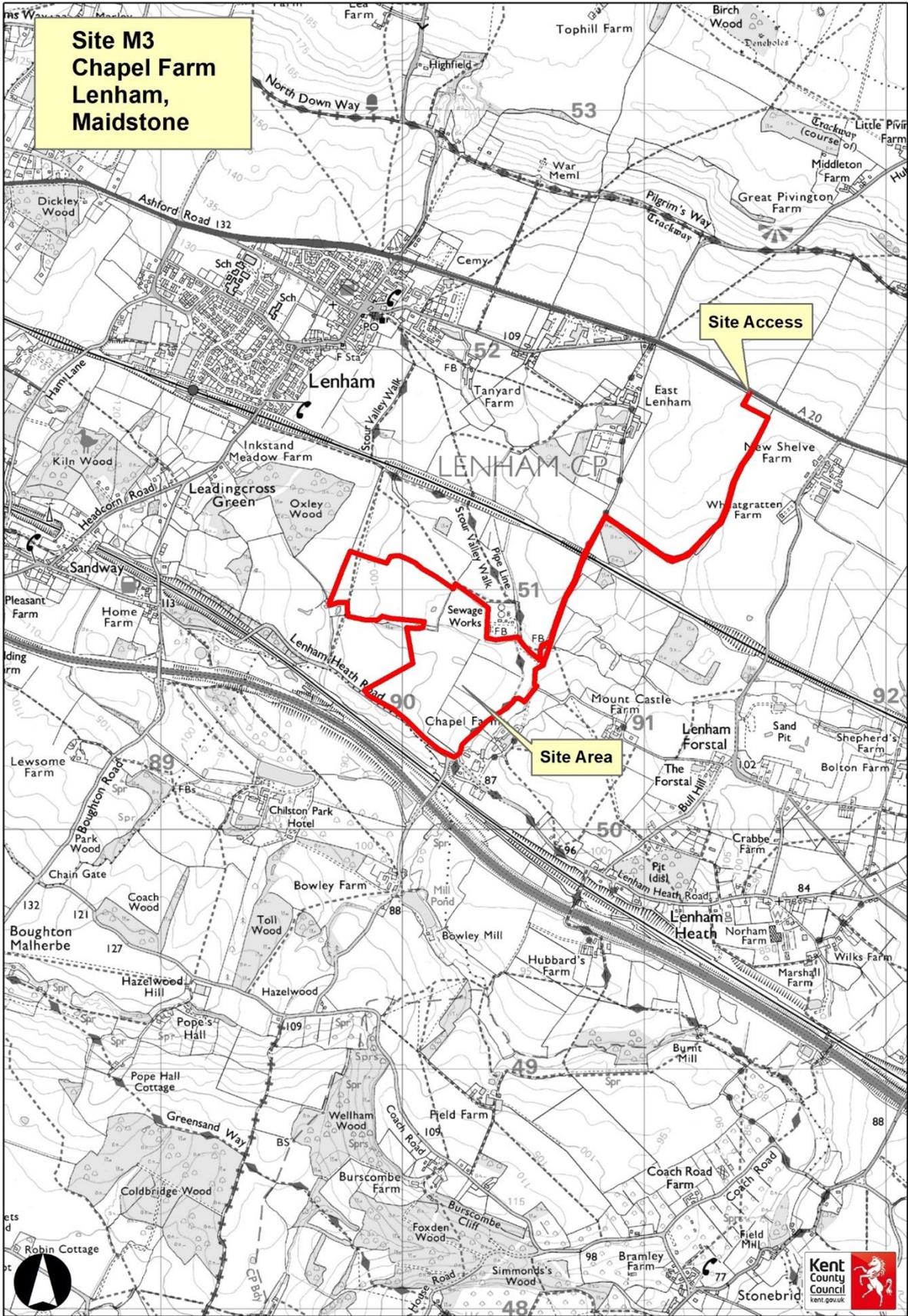
- A detailed transport assessment to demonstrate compliance with KMWLP Policy DM13.
- The Transport Assessment should consider ability to access the site via rail, impacts on the A20 and the Maidstone AQMA and show how any potential adverse impacts on this AQMA will be mitigated.

Utilities

- Demonstration that sensitive receptors such as sewage lines, electricity pylons and the railway lines will not be affected by land instability caused by the development.
- The functioning of the Lenham WWTW and other sewerage infrastructure must not be adversely impacted

Health and Amenity

- Compliance with policy DM11 of the Kent Minerals and Waste Local Plan in respect of health and amenity.
- A lighting, noise, dust, and vibration management plan should be completed, setting out how unacceptable impacts will be avoided. A detailed dust assessment and management plan should be submitted which follows best practice and any national Government guidance (e.g. Planning Practice Guidance).

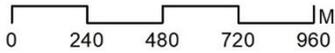


**Site M3
Chapel Farm
Lenham,
Maidstone**

Site Access

Site Area

1:20,000



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Kent Mineral Sites Plan

Mineral Site Assessment 2018

V2 December 2018

Contents

1	Introduction	3
2	Site Selection Methodology	4
3	Initial Site Assessment	9
4	Nominated Sites Eliminated at Initial Site Assessment Stage	42
5	Detailed Technical Assessment of Mineral Site Options	49
	M3: Chapel Farm, Lenham	52
	M8: West Malling Sandpit, Ryarsh	68
	M2: Lydd Quarry/Allen’s Bank Extension, Lydd	86
	M7: Land at Central Road, Dartford	100
	M10: Moat Farm, Five Oak Green, Capel	112
	M11: Joyce Green Farm Quarry Extension, Dartford - Sharp Sand and Gravel	123
	M12: Postern Meadows, Tonbridge	139
	M13: Stonecastle Farm Quarry Extensions, Hadlow/Whested	150
	M9 The Postern, Capel - Sharp Sand and Gravels	163
6	Conclusion	164
	Appendix 1 – Initial Site Assessment - RAG Sensitivity Scoring Criteria	167
	Appendix 2 - Green Belt Considerations – West Malling Sandpit (M8)	177
	Appendix 3 - Ryarsh Protection Group representation to Kent County Council, November 2018 - West Malling Sandpit (M8)	194
	Appendix 4 – Natural England’s Advice to KCC - Lydd Quarry (M2).....	213
	Appendix 5 - Alternative Supply of Aggregates and Socio-economic Considerations – Lydd Quarry (M2)	219

V1 First Draft for Publication - November 2018

V2 Green Belt Assessment – West Malling Sandpit – Review – December 2018

1 Introduction

The adopted Kent Minerals and Waste Local Plan 2013-30 (KMWLP) is part of the Development Plan for planning purposes. It sets out the overarching framework for the strategy and planning policies for sustainable minerals extraction, importation and recycling, and the management of all waste streams that are generated in Kent, together with their spatial implications. This includes consideration of the economic, social and environmental aspects of strategic minerals and waste planning within the county. The Plan was formally adopted by the County Council in July 2016.

Whilst the adopted Plan provides the strategy and policy framework for minerals and waste proposals to be considered against, it does not allocate specific sites suitable for development (except for two strategic sites for cement production at Holborough in the Medway Valley, and hazardous waste disposal at Norwood Quarry on the Isle of Sheppey). The adopted KMWLP identifies that suitable sites will be allocated in separate subsequent Kent Minerals and Waste Sites Plans. Some work was previously undertaken on preparation of the Sites Plans that led to a Preferred Options Consultation (for waste and minerals) in May 2012. To enable a more up-to-date appraisal of site suitability and deliverability it was considered necessary to undertake a second 'Call for Sites' exercise and this commenced in late 2016, continuing into 2017. To inform the process of site selection the County Council also published a 'living draft' methodology for site selection which was subject to public consultation. The Site Plan work has followed the methodology as set out in the Kent Mineral Sites Plan - Methodology for Site Selection 2018.

During 2017 a re-assessment of waste management capacity was undertaken that identified that there is no need for the allocation of specific waste sites in a separate Waste Sites Plan and so this document is concerned solely with the identification of mineral sites.

This document sets out a summary of the methodology, the initial assessment conclusions and the detailed technical assessment conclusions for those sites promoted following the second Call for Sites. An earlier document, Site Selection Methodology Initial Screening RAG Scores v 2 2017 set out the position at the initial screening assessment stage. The details are reproduced in this document for ease of reference.

2 Site Selection Methodology

The County Council proposes a robust site selection process to determine which sites should be progressed to allocations for minerals development in the Minerals Sites Plan. This was originally set out in the living draft Site Selection Methodology (published in October 2016) and included checking alignment with the scope of the Sites Plans, initial screening (as detailed in this document), identification of reasonable alternatives and detailed technical assessments.

In undertaking the work, a change was introduced into the assessment process which relates to the provision of an early opportunity for public engagement on potential sites. It is considered that there is benefit in seeking early views from stakeholders as this provides an opportunity for local knowledge and specialist information held by stakeholders to be considered as the plan emerges. As such the views of stakeholders will benefit the subsequent detailed technical assessment stage. Public engagement is also generally considered to be an important part of the plan-making process. The revised living draft Site Selection Methodology (revised November 2017) included alignment with the objectives of the adopted KMWLP and scope of the sites plan, initial screening, consultation on the site options and detailed technical assessment of the site options.

Stage 1 – Alignment with the objectives of the adopted KMWLP and scope of the Sites Plan

Those sites not falling within the scope of the adopted KMWLP, and modifications proposed by the partial review, which do not identify the need for the allocation of such a site, were eliminated at this stage. These sites are listed in Section 4 of this report.

Stage 2 - Initial Screening

At the initial screening stage, it was considered beneficial to consider all sites that had been promoted through the Call for Sites which were in alignment with the objectives of the KMWLP and the scope of the Sites Plan. This has provided comparable information for all promoted sites, should it be required at a later stage in the plan making process.

This initial screening of the sites utilises a refined ‘traffic light’ system based on a Red, Red-Amber, Amber, Amber-Green and Green (RAG) scoring methodology (See Table 1) to determine which sites will be published for consultation and go forward to the Detailed Technical Assessment stage. The RAG process acts as a scoping stage to highlight sites which might cause significant impacts, alone or in combination. It is primarily a desk-based procedure, supported by site visits.

Each site was RAG assessed against the following criteria:

- Landscape designations and potential visual impacts upon such designations
- Nature conservation interests and geodiversity
- Historic environment;
- Green Belt
- Water environment including flooding;
- Air quality;

- Soil quality;
- Public Rights of Way (PRoW);
- Transport (including access);
- Services and utilities;
- Health and Amenity i.e. noise, dust, odour, vibration impacts etc.
- Cumulative impacts; and
- Airport safeguarding

Table 1: Summary of the General RAG Assessment Methodology

Sensitivity Score	Description	Possible Mitigation
RED	The impact or issue is so severe that it would be unlikely to be adequately mitigated and no evidence has been provided on the potential mitigation and/or, in the case of sites within AONB existence of any relevant exceptional circumstance demonstrating it to be in the public interest. It is considered that the site is unlikely to be able to proceed	Mitigation in order to make the site acceptable is unlikely
RED- AMBER	There is a major impact or issue which may be made acceptable by mitigation	Likely to require high levels of mitigation in order to make the site acceptable
AMBER	There is a moderate impact or issue which may be made acceptable by mitigation	Likely to require medium levels of mitigation in order to make the site acceptable
GREEN- AMBER	There is a minor impact or issue which may be made acceptable by mitigation	Likely to require low levels of mitigation in order to make the site acceptable
GREEN	There are no impacts or issues relating to the criteria being assessed that require mitigation	Likely to require negligible to no mitigation in order to make the site acceptable

The way in which the RAG score is applied to each assessment criteria is detailed in the RAG Sensitivity Scoring Criteria, as appended at Appendix 1. In practice, the degree to which individual sites score on the Amber, Amber-Green and Green spectrum will determine the more sustainable solutions likely to progress to the next stage, consultation on the site options. Sites that received a Red score in the assessment were more likely to be ruled out at Stage 2 on the basis that they raise issue(s) of such severity that they are unlikely to be able to be adequately mitigated. This assessment process does not, however, automatically exclude sites that are assessed as red-amber from Stages 3 and 4, on the basis that suitable mitigation may be achievable. However, where a site scores Red-Amber against a number of criteria it was considered that it was less likely to progress to the next stages as it is more likely that the overall impacts and extent of mitigation required to make the site acceptable is so great that it would be likely to be undeliverable. The RAG scoring methodology is therefore intended to provide an 'indication' of a site's suitability or unsuitability.

Section 3 of this report details the RAG assessment for the sites that were promoted to the County Council as a consequence of the 'Call for Sites' exercise and not eliminated at Stage 1 above - alignment with the Plan.

Stage 3 - Consultation on Options

The sites which represented potentially sustainable options for minerals developments were identified via the RAG initial screening and went forward to Stage 3 as the Options for Consultation. These were set out in the Kent Minerals and Waste Local Plan 2013-30 Mineral Sites Plan Options Consultation Document November 2017. The document and supporting evidence were subject to public consultation between December 2017 and March 2018. Views were sought from a variety of stakeholder interests, including an early view from local communities in the vicinity of the sites. The views received have been taken into consideration in the Detailed Technical assessment phase. This work has also informed the sustainability appraisal and Habitat Regulation Assessment.

In addition to the RAG considerations, for a site to be considered as a Mineral Site Option it also had to:

- Align with the Objectives of the KMWLP - (Stage1 above);
- Be justified
- Be deliverable

Stage 4 - Detailed Technical Assessment to Identify the Preferred Options for allocation in Mineral Sites Plan

The site options which were identified as potentially suitable from the Initial Screening and RAG assessment work were subject to more rigorous detailed technical assessment. As appropriate, this included assessment in respect of a range of environmental impacts including landscape and visual impact, amenity, highways and transportation, biodiversity, historic environment, water resources and flood risk, impact upon Public rights of way land stability and need. As appropriate it also included assessment in respect of:

- Habitat Regulations

- Green Belt
- Requirements of National Planning Policy and Guidance
- The Kent Minerals and Waste Local Plan 2013-30

Where appropriate, additional information was provided by the promoter to aid the assessment process and consider issues raised as a result of public consultation or by technical consultees. The Detailed Technical assessment stage of the work has informed the Plan's Sustainability Appraisal.

In addition, to the above technical assessments, to ensure that the Sites Plan work is planning for sufficient requirements, the Detailed Technical Assessment stage of the work has included a review of the soft sand and sharp sand and gravel requirements for aggregates to be provided for in the Mineral Site Plan. Policy CSM2 of the KMWLP requires the Site Plan to allocate sites for soft sand and for sharp sand and gravel based upon the most recent calculations of requirements set out in the Local Aggregate Assessment. This work has identified a soft sand need of 2.5mt and a sharp sand and gravel need of 5.75mt. It should however be noted that as sharp sand and gravel resources in Kent are rapidly depleting, Policy CSM2 recognises that the sharp sand and gravel requirements only need to be met whilst resources allow. Further details are set out in the Soft Sand and Sharp Sand and Gravels Topic Papers 2018.

At the conclusion of this stage of the assessment process, those sites that are demonstrably acceptable against the selection criteria will be identified as Preferred Options for allocation in the Mineral Sites Plan.

In essence, for a site to be allocated it has to be where viable mineral resources are known to exist; where landowners are supportive of mineral development taking place and where the Mineral Planning Authority considers that planning applications are likely to be acceptable in principle in planning terms having regard to planning policy and guidance.

The conclusion of the Detailed Technical Assessment work is set out in **Section 6**.

3 Initial Site Assessment

This section of the report reproduces the conclusions of the earlier site assessment work. This was previously set out in Kent Minerals Sites Plan – Mineral Site Selection – Initial Assessment November 2017. A summary of these findings is also set out in the Kent Minerals and Waste Local Plan 2013-30 Minerals Sites Plan Options Consultation Document, November 2017.

RAG Scoring Mineral Sites

Abbreviations:

- AONB – Area of Outstanding Natural Beauty
- AQMA – Air Quality Management Area
- BAP – Biodiversity Action Plan
- GSPZ – Groundwater Source Protection Zone
- GVZ – Groundwater Vulnerability Zone
- KMWLP – Kent Minerals and Waste Local Plan
- LWS – Local Wildlife Sites
- PRN - Primary Route Network
- PROW – Public Right of Way
- SSSI – Site of Special Scientific Interest

Chapel Farm, Lenham (Ref. M3)

Address: Chapel Farm, Ashford Road, Lenham, Kent, ME17 2DP

Soft sand extraction, 4,000,000 tonnes over a period of 26 years at a rate of 150,000 tpa. Site is 58.67ha. Restoration: it is proposed to restore the site to a lower level by infilling and return the site back to an agricultural after use.

Consideration	RAG Outcome	Reason
Landscape Designations/Visual Impact	Amber	Although the site does not fall within the Kent Downs AONB, it is considered to be within its setting and so potentially could have a moderate adverse visual impact on views towards the site from within the AONB that may require mitigation/appropriate screening. This matter would be subject to further detailed technical assessment.
Nature Conservation and Geodiversity	Amber	Lenham Quarry (SSSI) is within 1km of the site, although it is unlikely to be adversely affected by the site. Ancient Woodland, notably Roughetts Shaw is situated onsite, although this woodland has a felling license. A number of BAP Priority Habitats and LWSs are located adjacent to the site; mitigation would need to be considered to prevent adverse impacts on these designations from the site.
Historic Environment	Amber	There are a number of listed buildings within 250m of the site, notably: Chapel Farm (Grade II), Royton Manor (Grade II*), Mount Castle Farm Cottage (Grade II), Chapel Mill (Grade II), Vine House (Grade II), The Forstal (Grade II). Chapel Farm and Royton Manor both lie within 100m of the site. Chilston Park (Grade II) Historic Garden lies adjacent to the site. A number of archaeological sites have been identified within the site. Mitigation is likely to be necessary to prevent adverse impacts on Kent's heritage assets and/or their setting.
Water Environment	Green	The site is in Flood Zone 1. Part of the site is within GSPZ 3. A large part of the site is situated on a Major Aquifer Intermediate. Sand and gravel workings are classed as water compatible development and would therefore have no unacceptable impact on water resources.
Air Quality	Green	The site is not within, or located near to an AQMA and poses low or no risk of adverse impacts to AQMAs or air quality.
Soil Quality	Amber-Green	The site contains Grade 3 quality soil – Good to Moderate. The soil may be impacted, although opportunities for restoration to agricultural after use have been proposed which may mitigate any impacts in the long term.

Public Rights of Way (PROW)	Amber-Red	There are a number of footpaths that are located within the site, or in close proximity, notably: KH397, KH398, KH408, KH409, KH409B and KH428. Given the proposed 26-year operations of the site, impacts on these footpaths would require mitigation which would include diversion.
Transport	Amber-Green	It is proposed to provide a new access route adjoining the site to the A20 (PRN). The route would initially follow an existing (unclassified) agricultural track before adjoining the planned access route (cutting through agricultural land). The site could have a minor adverse impact on transport and access in the absence of mitigation, which could be provided through planning obligations.
Services and Utilities	Amber-Green	Lenham sewage works are situated adjacent to the site and a sewer line cuts through the site. Power lines also cross the western section of the site. Any adverse impacts on these services/utilities would require mitigation.
Health and Amenity	Amber	There are a number of residential properties within 250m of the site. Given the close proximity of residential properties, mitigation is likely to be required to ensure the site does not cause an unacceptable impact on health and amenity (dust, noise, vibration, visual amenity etc.).
Cumulative Impact	Amber	The area immediately surrounding the site has been subject to extensive quarrying activity. The accumulation of activity at the site with that of the quarrying activity in the surrounding area may well have a cumulative impact on the environment and on the local community that would likely require mitigation.
Airport Safeguarding Zone	Green	The site is not within, or near to an Airport Safeguarding Zone.
Green Belt	Green	The site is not within the Green Belt.
Summary and Outcome of Scoring (including key issues and constraints)		<p>The site could make a significant contribution to the KMWLP requirements in the supply of soft sand.</p> <p>Overall, this assessment suggests that there are no constraints which cannot be overcome by appropriate mitigation. This site should therefore be subject to consultation as an option as well as further detailed technical assessment and Sustainability Appraisal.</p> <p>Key findings of this assessment which may need further attention at the detailed assessment stage are as follows:</p> <ul style="list-style-type: none"> • The site is within the setting of the Kent Downs AONB and appropriate mitigation measures would be required. • SSSI is located within 1km of the site, Ancient Woodland is situated on the site and a number of BAP Priority Habitats and LWS are located adjacent to the site; mitigation

	<p>measures would be required to prevent unacceptable adverse impacts on these designations.</p> <ul style="list-style-type: none">• There are a number of listed buildings within 250m of the site; mitigation would be required to protect these heritage assets and their setting.• A number of archaeological sites have been identified within the site and a full investigation would be required to prevent unacceptable adverse impacts and to preserve Kent's heritage assets.• The site contains Grade 3 quality soil (Good to Moderate). Appropriate consideration would be required to reduce the impact on this interest.• A number of public footpaths are located within the site or in close proximity. Impacts on these footpaths would require mitigation which would include diversion.• Overhead electrical power lines and sewer lines located within or adjacent to the site would require appropriate consideration of rerouting and mitigation.• There are a number of residential properties within 250m of the site. Given the close proximity, mitigation would be required to ensure there are no unacceptable adverse impacts on health and amenity.• The surrounding area has been subject to extensive quarrying activity for a number of years. The cumulative impacts on the environment and local community, along with the impact on the highway network would need to be appropriately considered.• An appropriate transport and access arrangement to prevent unacceptable adverse impacts on local amenity would also need to be considered.
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Double Quick Farm, Charing (Ref. M14)

Address: Double Quick Farm Sawmill, Lenham Forstal Road, Lenham Heath, Kent, ME17 2BZ

Soft sand extraction, 1,000,000 tonnes over a period of 10 years at a rate of 100,000 tpa. Site is 3ha. Restoration: back fill with clean inert/re topsoil.

Page 41

Consideration	RAG Outcome	Reason
Landscape Designations/Visual Impact	Amber	The site is within 2km of the Kent Downs AONB (approximately 1.3km) with separation afforded by the rail line and A20 to the north. The site is also within an area of open countryside. As such, landscape assessment would be required to determine the extent of any impact and any mitigation necessary to prevent any adverse impact on the open countryside and setting of the AONB.
Nature Conservation and Geodiversity	Green	The site would have no impact on international, national or local designations.
Historic Environment	Amber-Green	Individual listed buildings are located within 500m of the site, one of which is within 250m. The site may have an impact on the nearby listed building within close proximity that could likely be addressed through mitigation.
Water Environment	Amber-Red	The site lies within GSPZ 3, GVZ Major Aquifer Intermediate and Principal Bedrock Aquifer. Given the presence of the GSPZ, GVZ and Aquifer across the whole of the site, development may have a major impact on vulnerable water bodies in the absence of mitigation.
Air Quality	Green	The site is not within or near to an AQMA.
Soil Quality	Amber	Natural England's Agricultural Land Classification Map states that the site contains Grade 3 (Good to Moderate) quality soil which is likely to be impacted by the site activities. Opportunities for mitigation/restoration exist in returning the site to agricultural use.
Public Rights of Way (PROW)	Amber-Green	Footpaths AW11A and KH402 are both located within 90m of the site. The site would not require the footpaths to be diverted, although mitigation/screening may need to be considered.
Transport	Red	It is proposed for the site to adjoin Lenham Forstal Road (a narrow unclassified country lane) which after approximately 2km adjoins the A20. There are severe impacts associated with accessing the site in that the surrounding road network is considered unsuitable for HGVs.
Services and Utilities	Green	There are no services or utilities near to or within the site.
Health and Amenity	Amber-Red	The site is located within close proximity to the small village/hamlet of Lenham Heath. There are a number of dwellings within 90m and adjacent to the site. The site could have major adverse impact to health and amenity in the locality in terms of dust, noise, vibration, visual intrusion and traffic

		associated with operations at the site which would likely require mitigation.
Cumulative Impact	Amber-Red	The area surrounding the site has a longstanding history of quarrying activity which may well result in an unacceptable adverse impact on environment and/or community that would require mitigation.
Airport Safeguarding Zone	Green	The site is not near to, or within an Airport Safeguarding Zone.
Green Belt	Green	The site is not within the Green Belt.
Summary and Outcome of Scoring (including key issues and constraints)		<ul style="list-style-type: none"> • The site is within an area of open countryside and within 1.3km of the Kent Downs AONB; appropriate mitigation measures would be required. • There are a number of listed buildings within 500m of the site; mitigation would be required to protect these heritage assets and their setting. • Mitigation would be required to prevent unacceptable adverse impacts on the aquifers located within the site. • The site contains Grade 3 quality soil (Good to Moderate). Appropriate consideration would be required to reduce the impact on this interest. • A number of public footpaths are located within the site. Impacts on these footpaths would require mitigation. • There are severe impacts associated with accessing the site in that the surrounding road network is considered unsuitable for HGVs. • There are a number of residential properties within 100m of the site (including in close proximity to the small village/hamlet of Lenham Heath). Given the close proximity, mitigation would be required to ensure there are no unacceptable adverse impacts on health and amenity. • The surrounding area has been subject to extensive quarrying activity for a number of years. The cumulative impacts on the environment and local community would need to be appropriately considered. <p>It is considered that the transport impacts could not be overcome and so the site is not proposed as an option for allocation in the Minerals Sites Plan.</p>

Joyce Green Quarry, Dartford (Ref. M11)

Address: Joyce Green Lane, Dartford, Kent, DA1 5PN

Sand and gravel extraction, 1,500,000 tonnes over a period of 10 years at a rate of 150,000 tpa. Site is 55ha. Restoration: water bodies with wetland edges to provide additional biodiversity and recreational use of parts of the site.

Consideration	RAG Outcome	Reason
Landscape Designations/Visual Impact	Amber	The site is not within the AONB. The site is not within an area of open countryside but does cover an area of marsh grazing land within what is otherwise a predominantly industrialised/urbanised area. Mineral extraction would temporarily compromise the open, natural landscape which would require mitigation.
Nature Conservation and Geodiversity	Amber	Inner Thames Marsh and Purfleet Chalk Farm (SSSI) both within 2km of the site. BAP habitat Coastal Saltmarsh and Mudflats adjacent to the site with half the site covered by BAP Coastal and Floodplain Grazing Marsh habitat. The whole site is covered by LWS – Dartford Marshes. The mineral extraction activities would result in the loss of the BAP Coastal and Floodplain Grazing Marsh habitat with proposed restoration to wetland. The BAP Coastal Saltmarsh and Mudflats adjacent to the site could also be adversely affected by mineral extraction at the site. The LWS Dartford Marshes would also be impacted by extraction activities although this may be appropriately addressed through the proposed wetland restoration. The impacts from development of the site may be mitigated or compensated such that there is net benefit to biodiversity from the proposed restoration.
Historic Environment	Amber-Green	The site is within an area of archaeological potential and investigative works would need to be undertaken to ensure there are no adverse impacts to Kent's heritage assets from development of the site.
Water Environment	Amber	The site lies within Flood Zones 2 and 3, and an area benefiting from flood defence. The southern extent of the site along with the permitted area of the site falls within GSPZ total catchment (zone 3). The site is also within Major Aquifer High Groundwater Vulnerability Zone. Sand and gravel extraction is considered water compatible development in accordance with the Flood Zone Vulnerability Classification Table, although the extraction activities may have a moderate adverse impact on other vulnerable water bodies (the GSPZ and Aquifer) requiring mitigation.
Air Quality	Amber	The site is within the vicinity of Dartford AQMAs 1, 2, 3 & 4. Bexley AQMA borders the site to the west. Given the proximity of the site to nearby AQMAs, the site may have an adverse impact on air quality requiring mitigation.

Soil Quality	Amber	Natural England's Agricultural Land Classification Map states that the site contains Grade 3 (Good to Moderate) quality soil. The soil is likely to be impacted by activities at the site, restoration opportunities exist although it is proposed to restore the site to wetland habitat.
Public Rights of Way (PROW)	Amber	Footpath DB1 and Darent Valley Path / London Loop run through the site and alongside the southern site boundary. Footpaths DB2 and DB4 run alongside the eastern site boundary. The site is likely to cause a moderate impact on the footpaths crossing the site and adjacent to the site which may require diversion and mitigation. Opportunities to restore/reinstate the footpaths upon completion of the mineral extraction and restoration exist.
Transport	Amber	The proposed access to the site would be via Joyce Green Lane (an unclassified rural lane) to the roundabout junction onto Bob Dunn Way (A206). The site has good transport links to the PRN/SRN. However, there may be issues with the site access in that Joyce Green Lane may not be suitable for usage by HGVs and significant work may need to be carried out to make the proposed access feasible.
Services and Utilities	Green	There are no services or utilities near to, or within the site.
Health and Amenity	Amber-Green	The area around site is mainly coastal flood plain used for grazing with a recreational shooting range in the east and commercial/industrial uses to the west. The quarry is unlikely to cause significant amenity impacts. To the south of the site are two dwellings that are likely to see an increase in traffic, vibration, noise and pollution and so mitigation is likely to be required.
Cumulative Impact	Amber-Green	The area has seen quarrying activity in the past, there is industrial activity to the north, east and west and further activity at the proposed site may have a negative impact on the environment/locality.
Airport Safeguarding Zone	Green	The site is not within an Airport Safeguarding Zone.
Green Belt	Amber-Green	The site is within the Green Belt. However, mineral extraction activity is not considered to be inappropriate development within the Green Belt. Associated activities such as processing and restoration may affect 'openness' and if proposed would need to demonstrate the existence of 'very special circumstances' as set out in Green Belt policy.

<p>Summary and Outcome of Scoring (including key issues and constraints)</p>		<p>The site could make a significant contribution to the KMWLP requirements in the supply of sharp sand and gravel.</p> <p>Overall, this assessment suggests that there are no constraints which cannot be overcome by appropriate mitigation. This site should therefore be subject to consultation as an option as well as further detailed technical assessment and Sustainability Appraisal.</p> <p>Key findings of this assessment which may need further attention at the detailed assessment stage are as follows:</p> <ul style="list-style-type: none"> • The site covers an area of marsh grazing land and appropriate mitigation measures would be required. • The entirety of the site is covered by LWS, SSSI is located within 2km of the site and BAP Habitats are located adjacent to the site; mitigation measures would be required to prevent unacceptable adverse impacts on these designations. • The site is located within an area of Archaeological Potential and a full investigation would be required to prevent unacceptable adverse impacts and to preserve Kent's heritage assets. • Mitigation would be required to prevent unacceptable adverse impacts on the aquifers located within the site. • The site is in close proximity to several AQMA's. Mitigation would be required to prevent an unacceptable adverse impact on the local air quality. • The site contains Grade 3 quality soil (Good to Moderate). Appropriate consideration would be required to reduce the impact on this interest. • The site is within the Green Belt, appropriate consideration would be required to consider the potential impact upon 'openness'. • A number of public footpaths are located within the site or in close proximity. Impacts on these footpaths would require mitigation which would include diversion. • Nearby road networks may be incapable of accommodating HGVs; mitigation would be required to ensure that the impact upon the local road infrastructure is reasonable. • There are a couple of residential properties in close proximity to the site. Given the close proximity, mitigation would be required to ensure there are no unacceptable adverse impacts on health and amenity. • The surrounding area has been subject to extensive quarrying activity for a number of years. The cumulative impacts on the environment and local community would need to be appropriately considered.
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Central Road, Dartford (Ref. M7)

Address: Central Road, Dartford, Kent, DA1 5AH

Sand & gravel extraction, 900,000 tonnes over a period of 10 years at a rate of 90,000 tpa. Site is 23.2ha.

Consideration	RAG Outcome	Reason
Landscape Designations/Visual Impact	Amber-Green	The site does not fall within the AONB. However, the site is within an area of open land that would be readily visible from the surrounding area, particularly the residential properties to the east and the A206 to the north – this may have a minor adverse impact requiring mitigation.
Nature Conservation and Geodiversity	Amber	The site is listed within the Priority Habitat Inventory for Coastal and Flood Plain Grazing Marsh with the site situated on LWS Dartford Marshes. The site is likely to have a significant effect on the local designation; potential mitigation measures have not been included in the proposal.
Historic Environment	Amber-Green	There are no listed buildings within close proximity to the site. However, the site is in an area of archaeological potential which would need to be addressed and potentially mitigated.
Water Environment	Amber-Green	The site falls within Flood Zone 2 and 3, GSPZ 2 (Outer Zone), an area of a Major Aquifer High Groundwater Vulnerability Zone and within an area of Secondary A and Secondary (undifferentiated) aquifers. The site also falls within an Area Benefitting from Flood Defence. Although the site is in an area of high flood risk, the proposed sand and gravel extraction is considered water compatible development in accordance with the Flood Risk Vulnerability Classification Table. The aquifer present may require consideration, and potentially mitigation, to prevent adverse impacts.
Air Quality	Amber	The site is near to 3 AQMAS, within 90m of the Dartford Town Centre AQMA. It is not specified how many vehicle movements would arise from operations at the site. The site could have an impact on air quality should traffic from the site pass through an AQMA that would require mitigation.
Soil Quality	Amber	The soil quality is stated as in part Grade 2 (Very Good) and Grade 3 (Good to Moderate) on Natural England's Agricultural Land Classification Map. Proposed restoration/after use is not stated and it is therefore possible that the Grade 2/3 quality soil may be lost without appropriate mitigation.
Public Rights of Way (PROW)	Amber-Green	The site is bordered by public footpath DB1 and bridleway DB4 to the west and to the east, both of which run in a north-south direction. Although the site is unlikely to require the two PROWs highlighted to be diverted, mitigation/screening may be required.
Transport	Amber-Green	Although access arrangements for the site aren't specified, the site adjoins Central Road (SRN)

		which is in close proximity to the A206 (PRN). Given that the site is located in a heavily industrialised area, mitigation may be required to prevent impacts resulting from an increase in vehicular movements in the area/associated with the site.
Services and Utilities	Amber	Powerlines are located within the site. These powerlines would require consideration and mitigation if extraction were to take place on site.
Health and Amenity	Amber	Residential properties are situated to the east and west of the site beyond Central Road and the River Darent with properties having views that look out on to what is currently undisturbed marshland. Mineral activities at the site would potentially result in a number of adverse impacts on health and amenity in the locality, notably dust, noise, vibration and visual intrusion that would require adequate mitigation.
Cumulative Impact	Amber	The site is located in an industrial area with substantial residential development taking place in the nearby vicinity. The nearby AQMA also suggests significant traffic movements nearby. These factors suggest that mitigation may be necessary to prevent adverse impacts on the local environment/community.
Airport Safeguarding Zone	Green	London City Airport is located approximately 11.4km from the site. While this is within the 13km Aerodrome Safeguarding Area radius it is not considered likely that operations at the site would result in an increased risk of bird-strike to aircraft.
Green Belt	Green	The site is not within the Green Belt.
Summary and Outcome of Scoring (including key issues and constraints)		<p>The site could make a significant contribution to the KMWLP requirements in the supply of sharp sand and gravel.</p> <p>Overall, this assessment suggests that there are no constraints which cannot be overcome by appropriate mitigation. This site should therefore be subject to consultation as an option as well as further detailed technical assessment and Sustainability Appraisal.</p> <p>Key findings of this assessment which may need further attention at the detailed assessment stage are as follows:</p> <ul style="list-style-type: none"> • The site is situated within the LWS Dartford Marshes and is likely to have a significant impact on the designation. Mitigation measures would be required to prevent unacceptable adverse impacts on this designation. • The site is located within an area of Archaeological Potential and a full investigation would be required to prevent unacceptable adverse impacts and to preserve Kent's heritage assets. • Mitigation would be required to prevent unacceptable adverse impacts on the aquifers

	<p>located within the site.</p> <ul style="list-style-type: none">• The site is in close proximity to three AQMA's. Mitigation would be required to prevent an unacceptable adverse impact on the local air quality.<ul style="list-style-type: none">• The site contains Grade 2 (Very Good) and Grade 3 (Good to Moderate) quality soil. Appropriate consideration would be required to reduce the impact on this interest.• The site borders a public footpath and bridleway. Impacts on these would require mitigation which could include diversion.• An appropriate transport and access arrangement to prevent adverse impacts on local amenity.• Overhead electrical power lines located within the site would require appropriate consideration of rerouting and mitigation.• There are a number of residential properties to the east and west of the site. Given the close proximity, mitigation would be required to ensure there are no unacceptable adverse impacts on health and amenity.• Substantial residential development is taking place in the nearby vicinity. Significant traffic movements need to be considered and appropriately mitigated, including the impact on the AQMA
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Moat Farm, Five Oak Green, Capel (Ref. M10)

Address: Moat Farm, Five Oak Green, Tonbridge, Kent, TN12 6RR

Sand and gravel extraction, 1,500,000 tonnes over a period of 15 years at a rate of 100,000 tpa. Site is 40.3ha and currently used for agriculture. Restoration: wetland habitat restoration using limited quantities of inert material.

Consideration	RAG Outcome	Reason
Landscape Designations/Visual Impact	Amber	The High Weald AONB is located approximately 1.8km to the north of the site and may therefore have some degree of adverse impact on its setting that may require mitigation. The site is also located within an area of open countryside which may require appropriate mitigation e.g. screening. A landscape assessment is required.
Nature Conservation and Geodiversity	Amber-Green	The site is bordered to the north-west by Ancient Woodland with further Ancient Woodland within 500m of the site to the south-west. Mitigation may be necessary to prevent any adverse impact on the Ancient Woodland.
Historic Environment	Amber-Green	The site is adjoined on its southern boundary by Moat Farm Listed Building. A number of other Listed Buildings are located within 1km to the east of the site in the village of Whetsted. Mitigation may be required to prevent adverse impact and to preserve the setting of Moat Farm.
Water Environment	Amber	The site is within Flood Zones 2 and 3. The site predominantly falls within GSPZ 2 with parts of the site falling in GSPZ 1. The site is partly within a Secondary Superficial Aquifer and Secondary (undifferentiated) aquifer, in addition GVZ - Minor Aquifer High covers the whole site. The sand and gravel extraction activities are considered water-compatible development in the Flood Risk Vulnerability Classification Table. Mitigation may be required to prevent adverse impact on the aquifers located within the site.
Air Quality	Green	The site is not within, or near to an AQMA.
Soil Quality	Amber-Red	Natural England's Agricultural Land Classification states that the soil is of Grade 3 (Good to Moderate) quality. The proposed restoration is to wetland habitat and therefore the agricultural land would be lost. Opportunities for mitigation/restoration to agricultural land exist.
Public Rights of Way (PROW)	Amber	Footpaths WT159 and WT158 cross the western extent of the site, with footpath WT169 runs along the southern boundary of the site. The two footpaths located on site would likely require extensive, and potentially permanent diversion with the proposed site restoration being wetland habitat.
Transport	Green	Access to the site is proposed via a purpose-built private road from Stonecastle Farm Quarry

		joining onto the A228 (Whetsted Road, PRN). The site would therefore utilise the existing access serving Stonecastle Farm Quarry.
Services and Utilities	Green	There are no services or utilities near to, or within the site.
Health and Amenity	Amber	There are residential properties within 1km of the site to the south in the village of Five Oak Green and to the east in the village of Whetsted, although only Moat Farm itself is located within 250m of the site. Given the sites proposed access and transport route via the existing Stonecastle Farm Quarry, the increase in traffic movements could potentially have a moderate adverse health and amenity impact in terms of traffic, noise etc. on properties in Whetsted and those located on or near to the A228 which would require mitigation.
Cumulative Impact	Amber	There has been a significant amount of quarrying activity in the area, notably with Stonecastle Farm Quarry to the east. The accumulation of activity at the proposed site and existing nearby quarry site may have a moderate adverse impact on the environment and/or community that would require mitigation.
Airport Safeguarding Zone	Green	The site is not within an Airport Safeguarding Zone.
Green Belt	Amber-Green	The site is within the Green Belt. However, mineral extraction activity is not considered to be inappropriate development within the Green Belt. Associated activities such as processing and restoration may affect 'openness' and if proposed would need to demonstrate the existence of 'very special circumstances' as set out in Green Belt policy.

<p>Summary and Outcome of Scoring (including key issues and constraints)</p>		<p>The site could make a significant contribution to the KMWLP requirements in the supply of sharp sand and gravel.</p> <p>Overall, this assessment suggests that there are no constraints which cannot be overcome by appropriate mitigation. This site should therefore be subject to consultation as an option as well as further detailed technical assessment and Sustainability Appraisal.</p> <p>Key findings of this assessment which may need further attention at the detailed assessment stage are as follows:</p> <ul style="list-style-type: none"> • The site is within 1.8km of the High Weald AONB and appropriate mitigation measures would be required. • Ancient Woodland borders the site; mitigation measures would be required to prevent unacceptable adverse impacts on this designation. • A listed building borders the site and a number of others are within 1km of the site; mitigation would be required to protect these heritage assets and their setting. • Mitigation would be required to prevent unacceptable adverse impacts on the aquifers located within the site. • The site contains Grade 3 quality soil (Good to Moderate). Appropriate consideration would be required to reduce the impact on this interest. • A number of public footpaths are located within the site or in close proximity. Impacts on these footpaths would require mitigation which would include diversion. • There are a number of residential properties within 1km of the site. Given the close proximity, mitigation would be required to ensure there are no unacceptable adverse impacts on health and amenity. • The site is within the Green Belt, appropriate consideration would be required to consider the potential impact upon 'openness'. • The surrounding area has been subject to extensive quarrying activity for a number of years. The cumulative impacts on the environment and local community, along with the impact on the highway network would need to be appropriately considered. • An appropriate transport and access arrangement to prevent unacceptable adverse impacts on local amenity.
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Lydd Quarry and Allens Bank Extension, Lydd (Ref. M2)

Address: Jury's Gap Road, Lydd, Kent, TN29 9JW

Sand and gravel extraction, 3,100,000 tonnes over a period of 12.3 years at a rate of 250,000 tpa. Site is 38.07ha. Restoration: it is proposed to restore the site to open water bodies.

Consideration	RAG Outcome	Reason
Landscape Designations/Visual Impact	Amber	The site is not within the AONB. It is within the open countryside and is a proposed extension to the existing Lydd Quarry and Allens Bank. Upon completion of mineral extraction at the site it is proposed to restore the site to open bodies of water. This would change the intrinsic character of the countryside in this locality although there are existing extensive areas of mineral workings including restored to open water/wetland in this immediate area.
Nature Conservation and Geodiversity	Amber-Red	The site is within the Dungeness, Romney Marsh and Rye Bay SSSI, adjacent to the Dungeness, Romney Marsh and Rye Bay Ramsar, SPA and SAC within 1km. BAP Priority habitat Coastal Vegetated Shingle is within and adjacent to the site with a number of other BAP habitats (Coastal and Floodplain Grazing Marsh, Deciduous Woodland, Traditional Orchard) within 1km of the site. The proposed site is likely to have a significant to moderate impact on the designations as the site is located within national designations, adjacent to international designations and within and in close proximity to local designations. The SSSI designation doesn't preclude extraction and may be acceptable if the geomorphological formations are widespread. There is also the possibility of enhancement through the creation of open water bodies through restoration.
Historic Environment	Amber	There are a number of Listed Buildings within 250m of the site, notably Tourney Hall (Grade II) adjacent to the site. The site is also located within an area of Archaeological Potential. Mitigation may be required to preserve the Listed Buildings and their setting; archaeological investigative works may also be necessary on the site before any extraction activity.
Water Environment	Green	The site is within Flood Zone 3 and benefits from flood defence. The site is within the Secondary Aquifer & Groundwater Vulnerability Zone notation for the area and the Minor Aquifer High notation that covers the whole site. Mineral extraction activities at the site would not have an unacceptable adverse impact on water resources.
Air Quality	Green	There are no AQMAs on, or within close proximity to the site.
Soil Quality	Green	Natural England's Agricultural Land Classification Map states the site contains Grade 4 (Poor) quality soil. Mineral extraction at the site would not result in the loss of good/very good quality soil.

Public Rights of Way (PROW)	Amber	Footpath HL26 borders and crosses the site, HL27 crosses the northern part of the site; HL48 borders the south of the site. It is likely that the footpaths highlighted would require temporary diversion. The stated proposed restoration is to open water bodies, although opportunities to restore the footpaths do exist.
Transport	Amber	Access to the site is via the Jury's Gap Road part of the SRN which serves the existing Lydd Quarry site, the PRN (A259) is some distance away (approximately 5km) past Lydd towards New Romney. There may be moderate transport impacts in that the access to the PRN would likely be via the town of Lydd, the road infrastructure may not cope with the increase in HGV movements, mitigation would be necessary.
Services and Utilities	Amber	Overhead electrical line route cuts through 'area 22' in the western extent of the site, adjacent to the existing Lydd quarry and sewage works. Sewer line runs through 'area 22' and 'area 23' of the site. The services and utilities highlighted could require consideration to affect any necessary re-routing or other mitigation.
Health and Amenity	Amber-Red	The town of Lydd lies adjacent to the south of the proposed site extensions, sharing a boundary with two areas of the site. A number of other residential properties are within close proximity to various areas of the site. Given the extensive area the site covers, the site could cause major adverse impacts (dust, noise, vibration, visual intrusion, traffic) to the health and amenity of the locality in the absence of mitigation.
Cumulative Impact	Amber	There are several restored mineral sites within the area, as well as the operational ones on which the extension is proposed. The site relates to multiple areas of extraction. The accumulation of the quarry extension with the existing quarry site may have a moderate adverse impact on the community and/or environment for which mitigation may be necessary.
Airport Safeguarding Zone	Amber-Green	The site is within 2.3km of Lydd Airport. It is not anticipated that the activities at the site would result in an increased risk of bird strike to aircraft.
Green Belt	Green	The site is not within the Green Belt.
Summary and Outcome of Scoring (including key issues and constraints)		<p>The site could make a significant contribution to the KMWLP requirements in the supply of sharp sand and gravel.</p> <p>Overall, the assessment suggests that there are no constraints which cannot be overcome by appropriate mitigation. This site should therefore be subject to consultation as an option as well as further detailed technical assessment and Sustainability Appraisal.</p> <p>Key findings of the assessment which may need further attention at the detailed assessment stage are as follows:</p>

- The quarry extension areas are located within SSSI, adjacent to Ramsar/SPA and within 1km of SAC. BAP Priority Habitat is located within the site as well as the surrounding area. Mitigation measures would be required to prevent unacceptable adverse impacts on these designations.
- Subject to a study of the geological and geomorphological interests of the site, restored quarry water habitat areas could contribute to the value of the designated areas.
- There are a number of listed buildings within 250m of the site; mitigation would be required to protect these heritage assets and their setting.
- The site is located within an area of Archaeological Potential and a full investigation would be required to prevent unacceptable adverse impacts and to preserve Kent's heritage assets.
- A number of public footpaths are located within the site or in close proximity. Impacts on these footpaths would require mitigation which would include diversion.
- Given the sites' distance from the Primary Route Network PRN (approximately 5km) mitigation would be required to ensure that the local road infrastructure (in particular the town of Lydd) is not adversely impacted.
- Overhead electrical power lines and sewer lines located within or adjacent to the site would require appropriate consideration of rerouting and mitigation.
- The town of Lydd lies adjacent to the site boundary. Given the close proximity, mitigation would be required to ensure there are no unacceptable adverse impacts on health and amenity.
- The surrounding area has been subject to extensive quarrying activity for a number of years. The cumulative impacts on the environment and local community, along with the impact on the highway network would need to be appropriately considered.

Postern Meadows, Tonbridge (Ref. M12)

Address: Postern Meadows, Postern Lane, Tonbridge, Kent, TN9 1SW

Sand and gravel extraction, 230,000 tonnes over a period of 3 years at a rate of 75,000 tpa. Site is 7.2ha. Restoration: to landscaped lake without any infilling and restoration to amenity, nature conservation and recreational use.

Consideration	RAG Outcome	Reason
Landscape Designations/Visual Impact	Amber-Green	The site is not within an area of open countryside, the site is bounded by industrial development to the south, west and north-west and the River Medway to the north and to the east. The site does not fall within the AONB although may be considered to fall within the High Weald AONBs setting, any potential minor impact could be addressed through mitigation.
Nature Conservation and Geodiversity	Amber-Green	There is an area of Ancient Woodland approximately 300m to the east of the site. BAP Habitat (traditional orchard) approximately 600m to the south east. An area of deciduous woodland approximately 500m to the west of the site. The site may have a minor adverse impact on the nearby local designations highlighted, although this could be addressed through mitigation and potentially enhanced in the future following restoration.
Historic Environment	Amber-Green	There are listed buildings within 500m of the site to the west and to the southeast, although it is unlikely that activities at the site would have an adverse impact on the listed buildings. The site is within an area of archaeological potential, prior investigative work may be required to ensure the preservation of any archaeological assets on or near to the site.
Water Environment	Amber	The site is within Environment Agency Flood Zones 2 and 3, GSPZ 3 (total catchment), Minor Aquifer High Groundwater Vulnerability Zone. The sand and gravel extraction at the site is considered water compatible development in the Flood Risk Vulnerability Classification Table. The site may have some impact on the GSPZ/Minor Aquifer that may require mitigation.
Air Quality	Green	The site is not within an AQMA. Tonbridge High Street AQMA is approximately 1km away although it is considered that the site would have an impact on the AQMA.
Soil Quality	Amber	Natural England's Agricultural Land Classification states that the soil is of Grade 3 (Good to Moderate) quality. The proposed restoration is to landscaped lakes and therefore the agricultural land would be lost. Opportunities for mitigation/restoration to agricultural land exist.
Public Rights of Way (PROW)	Amber	Footpath MU33 runs adjacent to the southern boundary of the site. Footpaths MU32 and MU34 are both within 90m of the site. Wealdway and Medway Valley Walk lies within 90m of the site. Footpath MU33 is currently well screened, however further mitigation/screening may well be

		necessary for the other footpaths listed to ensure there are no negative impacts.
Transport	Amber-Green	Access to the site would be created through the industrial site to then adjoin the A26 (Vale Road, PRN). Mitigation may need to be considered in creating the dedicated access and preventing increased traffic with regard to the industrial site.
Services and Utilities	Green	There are no services or utilities near to or within the site.
Health and Amenity	Amber	The site is located within a predominantly commercial/industrial area. Individual properties are located within 250m of the site which may be moderately impacted by the site in terms of health and amenity – noise, dust, vibration, and mitigation may be required to address these potential impacts.
Cumulative Impact	Amber-Green	Given that the site is within a commercial/industrial area and the proposed access would be located through the industrial site there may be some cumulative impact in terms of increased traffic movements associated with the site.
Airport Safeguarding Zone	Green	The site is not within or near to an Airport Safeguarding Zone.
Green Belt	Amber-Green	The site is within the Green Belt. However, mineral extraction activity is not considered to be inappropriate development within the Green Belt. Associated activities such as processing and restoration may affect 'openness' and if proposed would need to demonstrate the existence of 'very special circumstances' as set out in Green Belt policy.

<p>Summary and Outcome of Scoring (including key issues and constraints)</p>		<p>The site could make a contribution to the KMWLP requirements in the supply of sharp sand and gravel.</p> <p>Overall, this assessment suggests that there are no constraints which cannot be overcome by appropriate mitigation. This site should therefore be subject to consultation as an option as well as further detailed technical assessment and Sustainability Appraisal.</p> <p>Key findings of this assessment which may need further attention at the detailed assessment stage are as follows:</p> <ul style="list-style-type: none"> • The site is within the setting of the High Weald AONB and is bounded by industrial development; appropriate mitigation measures would be required. • Ancient Woodland is located within 300m of the site, deciduous woodland within 500m and BAP Habitat within 600m; mitigation measures would be required to prevent unacceptable adverse impacts on these designations. • There are a number of listed buildings within 500m of the site; mitigation would be required to protect these heritage assets and their setting. • The site is located within an area of Archaeological Potential and a full investigation would be required to prevent unacceptable adverse impacts and to preserve Kent's heritage assets. • Mitigation would be required to prevent unacceptable adverse impacts on the aquifers located within the site. • The site contains Grade 3 quality soil (Good to Moderate). Appropriate consideration would be required to reduce the impact on this interest. • The site is within the Green Belt, appropriate consideration would be required to consider the potential impact upon 'openness'. • A number of public footpaths are located in close proximity to the site. Impacts on these footpaths would require mitigation which would include diversion. • Increase in vehicular movements on nearby road networks would require mitigation to ensure that the local road infrastructure is not adversely impacted. • There are a number of properties within 250m of the site. Given the close proximity, mitigation would be required to ensure there are no unacceptable adverse impacts on health and amenity. • Cumulative impacts in terms of increased traffic movements would need to be considered and appropriately mitigated.
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Stonecastle Farm, Hadlow/Whetsted (Ref. M13)

Address: Stonecastle Farm Quarry, Whetsted Road, Whetsted near Tonbridge, Kent

Sand and gravel extraction, 1,000,000 tonnes over a period of 7 years at a rate of 200,000 tpa. Actual yield may be less due to quality issues. Site is 27.8ha. Restoration: phased restoration to follow after extraction - lakes, complex of vegetated/bare islands, trees kept back from lake edge.

Consideration	RAG Outcome	Reason
Landscape Designations/Visual Impact	Amber	The site is not within the AONB (the High Weald AONB is approximately 3km to the south west). The site is within an area of open countryside, the landscape of which would be considerably altered by the mineral extraction activities and proposed lake restoration – although this could enhance the landscape of the area.
Nature Conservation and Geodiversity	Amber	There is Ancient Woodland adjacent to the site. The site contains BAP habitat Deciduous Woodland. Although the adjacent woodland is likely to be maintained, sufficient mitigation would be necessary to ensure this. The BAP woodland is shown as lost on the restoration plans, but this could be offset or amended by restoration that includes replacement woodland.
Historic Environment	Amber-Green	There are individual Listed Buildings within 250m of the site. Although it is unlikely, the site may cause a minor adverse impact to the Listed Buildings that would require mitigation.
Water Environment	Amber	The site lies within Flood Zones 2 and 3. GSPZ zone 2 and partly 3 Secondary A Superficial Aquifer and GVZ - Minor Aquifer High. The nature of operations at the site (sand and gravel extraction) is considered water compatible development. However, the site could have a moderate adverse impact on GSPZ/vulnerable water bodies in the absence of mitigation.
Air Quality	Green	The site is not within, or in close proximity to AQMA.
Soil Quality	Amber	Natural England's Agricultural Land Classification Map states that the site contains Grade 3 (Good to Moderate) quality soil. The soil present although not of the highest quality, would be impacted by the mineral activity at the site. Although the proposed restoration is to lakes and vegetated/bare islands, opportunities for mitigation/restoration exist.
Public Rights of Way (PROW)	Amber-Green	PROW MT 160 runs along the northern edge of the River Medway, just north of the site (approx. 75m). PROW WT 168 is on the western boundary of the site which runs south from Hartlake Road. The two PROWs highlighted may be affected in their setting and require mitigation e.g. screening.
Transport	Green	It is proposed that the site would use the established access for the existing quarry. This site

		access adjoins directly on to the A228 (SRN). The site would not give rise to adverse impacts on transport and access to the PRN/SRN.
Services and Utilities	Amber-Green	There are overhead power lines that cross a small area of the south-western portion of the site. The power lines highlighted may require consideration and mitigation.
Health and Amenity	Amber-Green	There are individual residential properties within 1km of the site although they are unlikely to be adversely impacted by the proposal. The main impact on the locality would be the continuation of HGV movements at the established access and along the A228. Though this is unlikely to result in unacceptable levels of impact.
Cumulative Impact	Amber-Green	The proposed site is an extension to the existing Stonecastle Quarry site and as such there may be an adverse impact on the environment/locality from the continuation of extraction operations at the site.
Airport Safeguarding Zone	Green	The site is not within an Airport Safeguarding Zone.
Green Belt	Amber-Green	The site is within the Green Belt. However, mineral extraction activity is not considered to be inappropriate development within the Green Belt. Associated activities such as processing and restoration may affect 'openness' and if proposed would need to demonstrate the existence of 'very special circumstances' as set out in Green Belt policy.

<p>Summary and Outcome of Scoring (including key issues and constraints)</p>		<p>The site could make a contribution to the KMWLP requirements in the supply of sharp sand and gravel.</p> <p>Overall, this assessment suggests that there are no constraints which cannot be overcome by appropriate mitigation. This site should therefore be subject to consultation as an option as well as further detailed technical assessment and Sustainability Appraisal.</p> <p>Key findings of this assessment which may need further attention at the detailed assessment stage are as follows:</p> <ul style="list-style-type: none"> • The site is within 3km of the High Weald AONB and appropriate mitigation measures would be required. • The site contains BAP Habitat Deciduous Woodland with Ancient Woodland adjacent to the site; mitigation measures would be required to prevent unacceptable adverse impacts on these designations. • There are a number of listed buildings within 250m of the site; mitigation would be required to protect these heritage assets and their setting. • Mitigation would be required to prevent unacceptable adverse impacts on the aquifers located within the site. • The site contains Grade 3 quality soil (Good to Moderate). Appropriate consideration would be required to reduce the impact on this interest. • The site is within the Green Belt, appropriate consideration would be required to consider the potential impact upon 'openness'. • A number of public footpaths are located in close proximity to the site. Impacts on these footpaths would require mitigation which would include diversion. • Overhead electrical power lines located within the site would require appropriate consideration of rerouting and mitigation. • There are a number of residential properties within 1km of the site. Given the close proximity, mitigation would be required to ensure there are no unacceptable adverse impacts on health and amenity. • The surrounding area has been subject to extensive quarrying activity for a number of years. The cumulative impacts on the environment and local community would need to be appropriately considered. • An appropriate transport and access arrangement to prevent unacceptable adverse impacts on local amenity.
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The Postern, Capel (Ref. M9)

Address: The Postern, Postern Lane, Tonbridge, TN11 0QU

Sand and gravel extraction, reserve estimate of 600,000 tonnes to be confirmed, 5-year extraction is suggested. Site is 12ha. Restoration: proposed lakes following extraction.

Consideration	RAG Outcome	Reason
Landscape Designations/Visual Impact	Amber-Green	The site lies approximately 1km to the north of the High Weald AONB, although it could be considered to have a minor adverse impact on the AONBs setting which could be addressed through mitigation. In addition, the site lies within an area of open countryside which may also require mitigation to prevent adverse impacts. A landscape assessment is required.
Nature Conservation and Geodiversity	Amber-Green	BAP Traditional Orchards occupy a small part of the site although mitigation would be possible to preserve this habitat. An area of Ancient Woodland lies within 500m to the west of the site although is unlikely to be affected by activity at the site.
Historic Environment	Amber-Green	Three listed buildings are within 250m of the site, with two Archaeological Sites also within 250m of the site. Mitigation may be required to ensure there are no adverse impacts on the setting of the Listed Buildings and Archaeological Sites from activities at the site.
Water Environment	Amber	The site is within Flood Zones 2 and 3, GSPZ 3. The site is also located in area containing Secondary (undifferentiated) superficial aquifer and Minor Aquifer Intermediate. The sand and gravel extraction activities are considered water-compatible development in the Flood Risk Vulnerability Classification Table. Mitigation may be required to prevent adverse impact on the aquifers located within the site.
Air Quality	Green	The site is not within or near to an AQMA.
Soil Quality	Amber	Natural England's Agricultural Land Classification states that the soil is of Grade 3 (Good to Moderate) quality. The proposed restoration is to landscaped lakes and therefore the agricultural land would be lost. Opportunities for mitigation/restoration to agricultural land exist.
Public Rights of Way (PROW)	Green	The site would have no effect on PROWs/Kent's Long Distance Trails.
Transport	Amber	Access information to the site has not been provided with the site nomination and so details are unclear. Postern Lane lies within 500m to the south of the site and adjoins the A26 (PRN) within 1km to the West in Tonbridge, although this lane would unlikely be capable of accommodating HGVs given the fact it is narrow, and therefore would require widening/making suitable for HGVs.

		Should the site be accessed to the north, both a dedicated access and a route of transport connecting to the A26 would be required. The site presents issues in terms of access/egress to the site as well as accessing the PRN and mitigation would therefore be necessary as well as potential planning obligations.
Services and Utilities	Amber	High Pressure Gas Pipelines cross the site. The sites promoter has stated that these pipelines would need to be avoided during extraction/restoration rather than being rerouted and as such would require mitigation.
Health and Amenity	Amber-Green	There are a small number of residential dwellings within 250m of the site with the majority of nearby land use being industrial/agricultural. The issues associated with transport/access to the site would likely have an adverse impact on health and amenity in terms of traffic, noise, odour etc.
Cumulative Impact	Green	There are no concerns of cumulative impact resulting from development at the site.
Airport Safeguarding Zone	Green	The site is not within or near to an Airport Safeguarding Zone.
Green Belt	Amber-Green	The site is within the Green Belt. However, mineral extraction activity is not considered to be inappropriate development within the Green Belt. The submission indicates that the resource would be processed elsewhere, and this location has not yet been determined. Any processing and additional plant may affect 'openness' and would need to demonstrate 'very special circumstances' as set out in Green Belt policy.

<p>Summary and Outcome of Scoring (including key issues and constraints)</p>		<p>The site could make a contribution to the KMWLP requirements in the supply of sharp sand and gravel.</p> <p>Overall, this assessment suggests that there are no constraints which cannot be overcome by appropriate mitigation. This site should therefore be subject to consultation as an option as well as further detailed technical assessment and Sustainability Appraisal.</p> <p>Key findings of this assessment which may need further attention at the detailed assessment stage are as follows:</p> <ul style="list-style-type: none"> • The site is within 1km of the High Weald AONB and appropriate mitigation measures would be required. • BAP Traditional Orchards occupy a small part of the site and Ancient Woodland is within 500m of the site; mitigation measures would be required to prevent unacceptable adverse impacts on these designations. • There are a number of listed buildings within 250m of the site; mitigation would be required to protect these heritage assets and their setting. • A number of archaeological sites have been identified within 250m of the site and a full investigation would be required to prevent unacceptable adverse impacts and to preserve Kent's heritage assets. • Mitigation would be required to prevent unacceptable adverse impacts on the aquifers located within the site. • The site is within the Green Belt, appropriate consideration would be required to consider the potential impact upon 'openness'. • The site contains Grade 3 quality soil (Good to Moderate). Appropriate consideration would be required to reduce the impact on this interest. • Nearby road networks are unlikely to be capable of accommodating HGVs; mitigation would be required to ensure that the impact upon the local road infrastructure is reasonable. • High Pressure Gas Pipelines which cross the site would require appropriate consideration of rerouting and mitigation. • There are a number of residential properties within 250m of the site. Given the close proximity, mitigation would be required to ensure there are no unacceptable adverse impacts on health and amenity.
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West Malling Sandpit, Ryarsh (Ref. M8)

Address: Land at the Roughetts, Roughetts Road, Ryarsh, West Malling, Kent, ME19 5LA

Soft sand extraction, 3,100,000 tonnes over a period of 24 years at a rate of 130,000 tpa. Silica sand extraction, 500,000 tonnes over a period of 24 years at a rate of 20,000 tpa. Site is 12ha. Restoration: 5-year restoration to be returned to agricultural land (as existing).

Consideration	RAG Outcome	Reason
Landscape Designations/Visual Impact	Amber	The Kent Downs AONB lies immediately to the north of the site (separated by the M20) and the site is within an area of open countryside. It is likely that the site would require mitigation/screening to prevent any adverse impacts on the setting of the AONB and the open countryside. A landscape assessment would be required.
Nature Conservation and Geodiversity	Amber-Green	There are a number of international, national and local designations within close proximity to the site, notably: Trottiscliffe Meadow (SSSI, within 1.8km of the site), Ancient and Semi-Natural Woodland is located within the southern part of the site and surrounding the site, BAP Deciduous Woodland is located within the southern/western part of the site and surrounding the site. The site is unlikely to have an adverse impact on the SSSI highlighted. The proposed extraction intends to leave the Ancient Woodland and BAP Woodland intact, although mitigation would be necessary to ensure this.
Historic Environment	Amber-Green	There are a number of listed buildings within 500m of the site, 3 of which are within 260m of the site. In addition, there are a number of Scheduled Monuments within 1km of the site (Addington Long Barrow, within 960m and the Chestnuts Long Barrow within 1km), and Conservation Areas within 1km (Addington within 600m, Ryarsh Village within 640m and Offham Church within 800m). Mitigation may need to be considered to preserve Kent's heritage assets, particularly the listed buildings within close proximity to the site.
Water Environment	Amber-Green	The site is not located within Flood Zones 2 or 3. The site is located within GSPZ 3, is within Major Aquifer Intermediate Groundwater Vulnerability Zone, and Principal Bedrock Aquifer. The presence of the aquifer would require consideration prior to extraction and potentially mitigation.
Air Quality	Green	The site is not within, or in close proximity to an AQMA.
Soil Quality	Amber-Green	Natural England's Agricultural Land Classification Map states that the site contains Grade 3 (Good to Moderate) soil.
Public Rights of Way (PROW)	Amber	Footpaths MR152 and MR153 run through the site in an east-west direction. The two footpaths would require diversion/mitigation during the lifespan of the site, although there is potential to

		reinstate the footpaths during the restoration of the site as it is proposed to be returned to agricultural land (as existing).
Transport	Amber-Green	The proposed access to the site would be via Roughetts Road (Unclassified) which adjoins the site to the east. It is proposed that vehicles accessing the site would do so via the A20 (PRN) within 500m of the site to the south. There are individual properties along Roughetts Road which would need to be considered and potentially mitigated through planning obligations.
Services and Utilities	Amber-Green	Although no services or utilities are located on the site/area of extraction, a number of which have been identified as in close proximity to the site, including: Openreach/Telecom, Plancast/Telecom, SGN/Gas, South East Water/Water, Southern Water/Water and Sewage, UKPN/Electricity, Vodafone/Telecoms. Potential adverse impacts to these services and utilities may require
Health and Amenity	Amber	There are a number of properties within 500m of the site, with the village of Addington within 500m to the west. The nearest properties are approximately 200m from the site, some of which are located along Roughetts Road (the proposed transport/access route). Due to the close proximity of residential properties potential impacts to health and amenity in the locality in terms of noise, dust, traffic, vibration and visual intrusion would need to be assessed and mitigation measures proposed.
Cumulative Impact	Amber-Red	Wrotham Quarry is located approximately 800m from the site with a former quarry approximately 100m away. Given the history of quarrying activity in the area past and present and the site being located proximate to the AONB, cumulative impact would be expected in terms of additional traffic in the area and the adverse impact associated with quarrying activity more generally, and the effect this would have on the community and the environment.
Airport Safeguarding Zone	Green	The site is not within or near to an Airport Safeguarding Zone.
Green Belt	Amber-Green	The site is within the Green Belt. However, mineral extraction activity is not considered to be inappropriate development within the Green Belt. Associated activities such as processing and restoration may affect 'openness' and if proposed would need to demonstrate the existence of 'very special circumstances' as set out in Green Belt policy.

<p>Summary and Outcome of Scoring (including key issues and constraints)</p>		<p>The site could make a significant contribution to the KMWLP requirements in the supply of soft sand.</p> <p>Overall, the assessment suggests that there are no constraints which cannot be overcome by appropriate mitigation. This site should therefore be subject to consultation as an option as well as further detailed technical assessment and Sustainability Appraisal.</p> <p>Key findings of this assessment which may need further attention at the detailed assessment stage are as follows:</p> <ul style="list-style-type: none"> • The site is within the setting of the Kent Downs AONB and appropriate mitigation measures would be required. • SSSI is located within 1.8km of the site, Ancient Woodland and BAP Deciduous Woodland are located within the site and the surrounding area; mitigation measures would be required to prevent unacceptable adverse impacts on these designations. • There are a number of listed buildings within 500m of the site; mitigation would be required to protect these heritage assets and their setting. • A number of Scheduled Monuments and Conservation Areas are within 1km of the site and a full investigation would be required to prevent unacceptable adverse impacts and to preserve Kent's heritage assets. • Mitigation would be required to prevent unacceptable adverse impacts on the aquifers located within the site. • The site contains Grade 3 quality soil (Good to Moderate). Appropriate consideration would be required to reduce the impact on this interest. • The site is within the Green Belt, appropriate consideration would be required to consider the potential impact upon 'openness'. • Two public footpaths are located within the site. Impacts on these footpaths would require mitigation which would include diversion. • There are a number of residential properties within 500m of the site (including the village of Addington). Given the close proximity, mitigation would be required to ensure there are no unacceptable adverse impacts on health and amenity. • The surrounding area has been subject to extensive quarrying activity for a number of years. The cumulative impacts on the environment and local community, along with the impact on the highway network would need to be appropriately considered. • An appropriate transport and access arrangement to prevent unacceptable adverse impacts on local amenity.
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Wrotham Quarry Extension, Addington/Trottiscliffe (Ref. M5)

Address: Wrotham Quarry, Addington, West Malling, Kent, ME19 5DL

Soft sand extraction, 790,000 tonnes over a period of 16 years at a rate of 50,000 tpa. Silica sand extraction, 1,570,000 over a period of 16 years at a rate of 100,000 tpa. Site is 17.5ha. Restoration: restoration would be back to agricultural land at original ground levels following infilling with inert waste materials.

Consideration	RAG Outcome	Reason
Landscape Designations/Visual Impact	Red	The site is located proximate to the M20 but in an area of open countryside within the Kent Downs AONB and would likely have a detrimental effect on the landscape setting. Para 116 expects that major development should not be allowed within AONBs unless there are exceptional circumstances.
Nature Conservation and Geodiversity	Amber-Green	Trottiscliffe Meadows (SSSI) lies within 250m (approximately 100m) to the west of the site boundary. Halling to Trottiscliffe Escarpment (SSSI) is located approximately 1.2km away. Ryarsh Wood (Ancient Woodland) lies immediately adjacent to the site to the north east. BAP Habitat – Woodland Priority Habitat Network lies within the site with BAP Habitat - Lowland Meadows lies approximately 100m from the site. The Trottiscliffe Meadows SSSI is designated for its floral importance which reduces the potential impact of the quarry. It is also already bordered by an existing quarry. The Ancient Woodland is unlikely to be impacted by the proposal, restoration measures also include extending Ryarsh Wood allowing for potential enhancement.
Historic Environment	Amber-Green	Woodgate Farmhouse and Woodgate Cottage Listed Buildings lie within 90m of the site. A number of Archaeological Sites lie within 90m of the proposal. Addington and Trottiscliffe Conservation Areas are both approximately 500m distance from the site. A recent extension to Wrotham Quarry has been permitted in closer proximity to the Listed Buildings highlighted than the proposal; however, consideration and potential mitigation may still need to be given to preserve the Listed Buildings. Although there are no Archaeological Sites within the proposed site, the quantity of sites in the surrounding area suggest a potential for archaeological finds within the site, prior investigative work could clarify this to prevent adverse impacts on Kent's Heritage Assets.
Water Environment	Amber-Green	The site falls within GSPZ 3 and GVZ – Major Aquifer Intermediate. The site is not at significant risk of flooding; however, consideration/mitigation may need to be given to the Major Aquifer present on site to prevent impacts to water sources.

Air Quality	Amber	Although the site itself does not lie within an AQMA, the nearest AQMAs are the M20 (1) approximately 5.7km away, TMBC 7 - Borough Green approximately 4.34km away, Larkfield AQMA approximately 4.73km away and the M20 approximately 4.86km away. Therefore, whilst the site is not within an AQMA the main access routes on the PRN and SRN contain several AQMAs with the exception of the A228 which may adversely impact on Air Quality within the AQMAs.
Soil Quality	Amber-Green	Natural England's Agricultural Land Classification Map states that the soil present on the site is of Grade 3 (Good to Moderate) quality. As such, agricultural land would be lost as a result of mineral extraction at the site. However, restoration measures include returning the site back to agricultural land which may improve the quality of soil present at the site.
Public Rights of Way (PROW)	Amber	The Weald Way (PROW) crosses the eastern part of the site in a northerly direction. Two further PROWs cross the site to the west. These PROWs would require diversion for the duration of mineral extraction at the site. There are opportunities for the diverted PROWs to be reinstated following restoration at the site.
Transport	Amber	Access to the site would be via the existing quarry and private access. Access to the site from the existing quarry would be via a tunnel beneath Addington Lane. Access would be from the A20 (PRN) to the west via Ford Lane and a private 1.2km access road. The A20 lies within 1km of the existing quarry access. Junction 2a of the M26 (SRN) lies within 5km. Potential issues exist in using Ford Lane as this route is not necessarily a suitable road to accommodate quarry traffic, especially when taking into account the cumulative impacts with the existing quarries in the area.
Services and Utilities	Green	There are no services or utilities near to, or within the site.
Health and Amenity	Amber	Land use in close proximity to the site is mainly agricultural or existing quarry works meaning the potential for sensitive receptors is low. However, residential areas in Addington and Trottiscliffe are approximately 500-600m from the site, residents may experience issues relating to noise, dust and pollution from HGVs travelling to and from the site.
Cumulative Impact	Amber	This area is currently being extensively quarried and restored meaning there is intensive quarrying activity for a significant period of time, as such a large number of HGVs would be using the access roads. The restoration of the southerly quarry site and the opening up of the proposed site would intensify mineral extraction and associated operations in the locality.
Airport Safeguarding Zone	Green	The site is not within, or near to an Airport Safeguarding Zone.
Green Belt	Amber-Green	The site is within the Green Belt. However, mineral extraction activity is not considered to be inappropriate development within the Green Belt. Associated activities such as processing and restoration may affect 'openness' and if proposed would need to demonstrate the existence of 'very special circumstances' as set out in Green Belt policy.

**Summary and
Outcome of Scoring
(including key
issues and
constraints)**

It is not proposed that this site form an option for consultation as it is located within the Kent Downs AONB. Other sites have been identified as options for meeting the need for supplying soft sand which are located outside of the AONB. Allocation of the site would therefore be contrary to the National Planning Policy Framework as it would be possible to maintain an adequate landbank for soft sand outside of the AONB through other allocated sites – as long as these are developed. There is no expectation within the KMWLP that a site should be allocated for meeting requirements for silica sand.

4 Nominated Sites Eliminated at Initial Site Assessment Stage

The following sites were nominated and eliminated at Initial Site Assessment Stage on the basis that the adopted Kent Minerals and Waste Local Plan, and modifications proposed by the partial review, do not identify the need for the allocation of such a site.

Name of Site	Address of Site	Purpose of site nomination	Reason for elimination at Stage 1
Paradise Farm	Lower Hartlip Road, Sittingbourne, Kent, ME9 7SR	Brickearth extraction, 885,900 tonnes over a period of 19 years at a rate of 46,600 tpa	<p>Majority of nominated site has recently been granted planning permission for brickearth extraction and the remaining areas would not be viable.</p> <p>The promoted site has and was the subject of a planning application in 2016 (ref. SW/0277/2016 for 0.885mt of Brickearth to be extracted over 19 years). This was permitted (January 2017) with deletion of two working phases that were adjacent to Newington (phases 16 and 17) and a minor area to the westerly quadrant of the site. This reduced the permitted reserve to 0.75mt to be extracted over 18 years. The un-permitted areas are nominated for allocation in the Minerals Sites Plan. The total reserve in Kent of Brickearth are 0.75mt at Paradise Farm, 0.15 mt at Orchard Farm, an estimated 0.08mt at Hempstead House and Jeffries, Claxfield Road that has an estimated reserve of 0.095mt. Overall the Kent Brickearth reserve is some 1.075mt. Those reserves under the control of the promoter amount to 0.995mt of this and would provide for approximately 23-24 years, almost for the required period of 25 years. The adopted Plan requires sites to be identified for the supply of Brickearth to have reserves of at least 25 years to support the level of actual and proposed investment of existing plant and equipment. Furthermore, the Brickearth resources that are still being promoted represent areas that are considered too small to be sites in their own right and may be unacceptable for material planning considerations.</p>

Name of Site	Address of Site	Purpose of site nomination	Reason for elimination at Stage 1
Norwood Quarry (Engineering Clay)	Land adjacent to Norwood Quarry, Lower Road, Minster on Sea, Sheppey, Kent, ME12 3AJ	Engineering clay extraction, 1,000,000m ³ over a period of 22 years at a rate of 50,000m ³ .	This site is identified in the Minerals Sites Plan though this site is an allocation in the adopted KMWLP. Further supply of clay for engineering purposes has been promoted through the Call for Sites exercise, as an extension to this site. The site promoter wishes to extract 1 million cubic metres of London Clay (at a rate of 50,000 cubic metres per annum) in three phases (1-3). Phase 3 and part of Phase 2 is currently the identified in the KMWLP as the strategic allocation for engineering clay extraction to meet needs for the clay and to create void space for the disposal of residues from Energy from Waste (EfW) processes in Kent. Thus, this strategic allocation currently adopted underpins the waste strategy needs of the KMWLP. The promoted site extension has a Phase 1 and the majority of a Phase 2. These areas, together with the adopted strategic allocation, would release significantly more engineering clay material than current need suggests is required. The strategic allocation site is identified as an adequate clay reserve up to 2030 in the adopted KMWLP. The NPPF does not
Richborough Road	Ramsgate Road, Richborough, Sandwich, Kent, CT13	Limestone extraction, 47,000,000 tonnes over a period of 19 years at a rate of 2,500,000 tpa.	A site providing this type of mineral is not required for allocation.
Wrotham Quarry Extension (Silica Sand)	Wrotham Quarry, Addington, West Malling, Kent, ME19 5DL	Silica sand extraction, 1,570,000 over a period of 16 years at a rate of 100,000 tpa.	A site providing this type of mineral is not required for allocation. Silica sand is a mineral that has national importance due to its limited distribution and its specialist application in industrial processes such as glass manufacture and as a foundry sand amongst others. In Kent the deposit is found in the Folkestone Formation as parts of the geological unit with particular purity. The NPPF states: <i>Minerals planning authorities should plan for a steady and adequate supply of industrial minerals by:</i>

¹ 1 cubic metres of stiff wet clay has a mass of 1.826 tonnes

Name of Site	Address of Site	Purpose of site nomination	Reason for elimination at Stage 1
			<p><i>providing a stock of permitted reserves to support the level of actual and proposed investment required for new or existing plant and the maintenance and improvement of existing plant and equipment, as follows:</i></p> <ul style="list-style-type: none"> - <i>at least 10 years for individual silica sand sites;</i> - <i>at least 15 years for cement primary (chalk and limestone) and secondary (clay and shale) materials to maintain an existing plant, and for silica sand sites where significant new capital is required.</i> <p>The adopted KMWLP states that the MPA will seek to permit sites to meet the above requirements and that proposals will be considered on their merits having regard to the policies of the Development Plan as a whole, with consideration of the technical matters and the husbanding of the material of high-grade (pure) deposits for industrial end uses. The Plan does not require silica sand sites to be allocated in the Mineral Sites plan and none have been promoted.</p>
Collarmakers Quarry	Collarmakers Quarry, Sandwich Road, Ash, Canterbury, Kent, CT3 2AH	Sand extraction, 500,000 tonnes over a period of 10 years at a rate of 50,000 tpa. Inert Waste. 100,000 tpa capacity. Site is 10ha.	Geology includes part the complex Lambeth Group of sands, clays and gravels. The formation has been quarried in the past (Upnor Quarry in Medway where the outcropped is a fine to medium grained clean sand to sandy clay that can be well graded, rounded flint gravel is also present). The promoted site reserve is only estimated (no bore hole data has been supplied) nor is there any supporting technical evidence to demonstrate that the resource in this location is capable of yielding a building sand aggregate.

Name of Site	Address of Site	Purpose of site nomination	Reason for elimination at Stage 1
Wey Street Quarry	Wey Street Farm, Wey Street, Hernhill, Faversham, Kent, ME13 9JB	Sand and gravel extraction, 2,000,000 tonnes over a period of 20 years at a rate of 100,000 tpa. Site is 20ha. Inert waste, 100,000 tpa capacity.	Geology includes part of the complex Lambeth Group of sands, clays and gravels. The formation has been quarried in the past (Upnor Quarry in Medway where the outcropped is a fine to medium grained clean sand to sandy clay that can be well graded, rounded flint gravel is also present). The promoted site reserve is only estimated (no bore hole data has been supplied) nor is there any supporting technical evidence to demonstrate that the resource in this location is capable of yielding a sand and gravel aggregate.
Hegdale Quarry	Hegdale quarry, Faversham Road, Baddlesmere near Faversham, Kent, ME13 0JX	Chalk extraction, 1,500,000m ³ over a period of 15 years at a rate of 50,000m ³ . Asbestos disposal, 100,000 tpa capacity.	The nominated site is an extension to an existing quarry of the same name in the Kent Downs Area of Outstanding Natural Beauty (AONB), a planning application would only be successful if it could be demonstrated that there were exceptional circumstances justifying the extraction of chalk in this sensitive landscape and it was in the public interest. Assessment of the site suggests that exceptional circumstances would not exist, and none have been advanced by the site promoter. Moreover, the site has an estimated 1.5 cubic million metres of chalk that would yield some 3.75mt of chalk and this reserve alone would last for 58 years at the recorded 2011-14 average sales rate of extraction. The indicated current chalk reserve position in Kent, that is sufficient for the anticipated Plan period, also suggests that there is no need to identify the promoted site in the Minerals Sites Plan at this time. The recorded average per annum sales for the period 2011-14 is 69,955 tonnes. Assuming the same sales per annum for the period 2015-16 (0.14mt in total) the 2014 reserves of 1.50 mt would now be reduced to 1.37mt. Assuming that extraction has remained at a level equivalent to the average of the 2011-14 period (0.07mtpa) the current permitted reserves will be sufficient for 22 years, if sales have been lower, closer to that recorded in 2014 (38,810 tonnes) then the permitted landbank could be sufficient for some 39 years. The Minerals Sites Plan is anticipated to be for the period 2019 to 20-30 a time of 11years. Therefore, there are sufficient permitted reserves of engineering and

Name of Site	Address of Site	Purpose of site nomination	Reason for elimination at Stage 1
			<p>agricultural chalk in the county at this time for the anticipated plan period.</p> <p>Sites providing additional waste management capacity are not required for allocation.</p>
Blaise Farm (Cranford)	Blaise Farm Quarry, West Malling, Kent, ME19 4PN	Organic, Composting and Anaerobic Digestion.	Sites providing additional waste management capacity are not required for allocation. See Partial Review of KMWLP consultation documentation for more details.
Chilmington Green	Mock Lane, Chilmington Green, Ashford, Kent, TN23 3DS	Energy from Waste, Gasification and Anaerobic Digestion. 500,000 tpa capacity.	Sites providing additional waste management capacity are not required for allocation. See Partial Review of KMWLP consultation documentation for more details.
Dunbrik Works	Land at Dunbrik Works, Main Road, Sundridge, Kent, TN14 6EP	Waste Transfer Station and Household Waste Recycling Centre.	Sites providing additional waste management capacity are not required for allocation. See Partial Review of KMWLP consultation documentation for more details.
Kemsley	DS Smith Kemsley Mill, Kemsley, Sittingbourne, Kent, ME10 2TD	Energy from Waste. 350,000 tpa capacity	Sites providing additional waste management capacity are not required for allocation. See Partial Review of KMWLP consultation documentation for more details.
Lympne Recovery	Enterprise Way, Link Enterprise Park, Lympne, Kent, CT21 4LP	Gasification/Anaerobic Digestion/Depolymerisation. 500,000 tpa capacity.	Sites providing additional waste management capacity are not required for allocation. See Partial Review of KMWLP consultation documentation for more details.
North Farm Lane	North Farm Lane, Tunbridge Wells, Kent, TN2 3EE	Energy from Waste, Gasification and Anaerobic Digestion. 500,000 tpa capacity.	Sites providing additional waste management capacity are not required for allocation. See Partial Review of KMWLP consultation documentation for more details.
Pedham Place	KCC Highways Depot, Pedham Place, London	Household Waste Recycling Centre, Waste Transfer Station. 100,000 tpa capacity.	Sites providing additional waste management capacity are not required for allocation. See Partial Review of KMWLP consultation documentation for more details.

Name of Site	Address of Site	Purpose of site nomination	Reason for elimination at Stage 1
	Road, Swanley, Kent, BR8 8TJ		
Richborough HWRC	Kent County Council Household Waste Recycling Centre, Ramsgate Road, Richborough, Sandwich, Kent, CT13 9NW	Household Waste Recycling Centre, Waste Transfer Station. 100,000 tpa capacity.	Sites providing additional waste management capacity are not required for allocation. See Partial Review of KMWLP consultation documentation for more details.
Sevington	Sevington Depot, Waterbrook Avenue, Ashford, Kent, TN24 0GB	Green Waste, Anaerobic Digestion/Energy from Waste, Bio Treatment. 80,000 tpa capacity.	Sites providing additional waste management capacity are not required for allocation. See Partial Review of KMWLP consultation documentation for more details.
Shelford	Shelford Landfill Site, Shelford Farm Estate, Broad Oak Road, Canterbury, Kent, CT2 0PU	Waste Transfer Station, Commercial and Industrial Waste. 40,000 tpa capacity.	Sites providing additional waste management capacity are not required for allocation. See Partial Review of KMWLP consultation documentation for more details.
Springhead	Station Road, Springhead, Dartford, Kent, DA13	Energy from Waste. 600,000 tpa capacity	Sites providing additional waste management capacity are not required for allocation. See Partial Review of KMWLP consultation documentation for more details.
Stone Pits	London Road, Dartford, Kent, DA9 9LD	Landfill, Inert Waste. 186,000 m ³ pa capacity.	Sites providing additional waste management capacity are not required for allocation. See Partial Review of KMWLP consultation documentation for more details.
The Forstal	Kent County Council, The Forstal, Beddow Way, Aylesford, Kent, ME20 7BT	Household Waste Recycling Centre, Waste Transfer Station. 30,000 tpa capacity.	Sites providing additional waste management capacity are not required for allocation. See Partial Review of KMWLP consultation documentation for more details.
Tilmanstone	Tilmanstone Colliery Tip	Landfill, Inert Waste. 100,000 tpa capacity	Sites providing additional waste management capacity are not required for allocation. See Partial Review of KMWLP consultation

Name of Site	Address of Site	Purpose of site nomination	Reason for elimination at Stage 1
	Regeneration, Pike Road, Eythorne, Dover, Kent, CT15 4ND		documentation for more details.
Unit P Continental Approach	Continental Approach and Car Park, Margate, Kent, CT9 4JL	Energy from Waste, 150,000 tpa capacity.	Sites providing additional waste management capacity are not required for allocation. See Partial Review of KMWLP consultation documentation for more details.
Westbere	Island Road, Canterbury, Kent, CT2 0EZ	Composting, Green Waste. 30,000 tpa capacity.	Sites providing additional waste management capacity are not required for allocation. See Partial Review of KMWLP consultation documentation for more details.
Westenhanger WTS	Newingreen, Hythe, Kent, CT21 4HU	Waste Transfer Station. 500,000 tpa capacity.	Sites providing additional waste management capacity are not required for allocation. See Partial Review of KMWLP consultation documentation for more details.
Norwood Quarry (Waste)	Land adjacent to Norwood Quarry, Lower Road, Minster on Sea, Isle of Sheppey, Kent, ME12 3AJ	Inert waste landfill, 1,000,000m ³ capacity. Hazardous waste landfill, 100,000m ³ capacity	Sites providing additional waste management capacity are not required for allocation. See Partial Review of KMWLP consultation documentation for more details.
Richborough Hall	Richborough Hall, Ramsgate Road, Richborough, Sandwich, Kent, CT13 9NW	Secondary and Recycled Aggregates. Permanent facility.	Sites already have benefit of full planning permission for waste treatment activities that give rise to recycled aggregates from the Construction, Demolition and Excavation Waste stream. In this regard the sites are fully operational and contributing to the current supply of recycled aggregates (844,946 tonnes in 2015 or 16.59% of overall supply of aggregates). The sites were promoted as sites that could expand their waste role as waste facilities beyond current activities.
Richborough Park	Richborough Park, Ramsgate Road, Richborough, Sandwich, Kent, CT13 9NW	Secondary and Recycled Aggregates. Permanent facility.	Sites providing additional waste management capacity are not required for allocation. See Partial Review of KMWLP consultation documentation for more details.

5 Detailed Technical Assessment of Mineral Site Options

Section 2 of this report sets out the process of the Detailed Technical Assessment (DTA) phase. At the conclusion of DTA stage of the assessment process, those sites that are acceptable against the selection criteria will be identified as Preferred Options for allocation in the Mineral Sites Plan.

In essence, for a site to be allocated it has to be where viable mineral resources are known to exist; where landowners are supportive of mineral development taking place and where the Mineral Planning Authority considers that planning applications are likely to be acceptable in principle in planning terms having regard to planning policy and guidance.

Policy CSM2 of the KMWLP sets out the following criteria for selecting and screening the suitability of sites for allocation in a Mineral Sites Plan:

- (i) The requirement for the mineral;
- (ii) Relevant development management policies;
- (iii) Relevant policies in district local plans and neighbourhood plans;
- (iv) Strategic environmental information, including landscape assessment and Habitat Regulation Assessment as appropriate;
- (v) Deliverability; and
- (vi) other National planning policy and guidance

The policy also states that sites to be identified in a Mineral Sites Plan will generally be where viable mineral resources are known to exist, where landowners are supportive of mineral development taking place and where the Mineral Planning Authority considers that planning applications are likely to be acceptable in principle in planning terms.

Those sites which were identified as potentially suitable for allocation subject to public consultation and detailed technical assessment from the Initial Screening and RAG assessment work have been subject to more rigorous detailed technical assessment. This stage considered a range of environmental impacts including landscape and visual impact, amenity, highways and transportation, biodiversity, historic environment, water resources and flood risk, impact upon Public rights of way land stability and need. As appropriate it also included assessment in respect of:

- Habitat Regulations
- Green Belt
- Requirements of National Planning Policy and Guidance
- The Kent Minerals and Waste Local Plan 2013-30
- Sustainability Appraisal for each site

The work has also included a review of the soft sand and sharp sand and gravel requirements to be provided for in the Mineral Site Plan. Policy CSM2 of the KMWLP requires the Site Plan to allocate sites for soft sand and for sharp sand and gravel based upon the most recent calculations of requirements set out in the Local Aggregate Assessment. The review work has identified **a soft sand need of 2.5mt and a sharp sand and gravel need of 5.75mt**. It should however be noted that as sharp sand and gravel resources in Kent are rapidly depleting, Policy CSM2 recognises that the sharp sand and gravel requirements only need to be met whilst resources allow. Further details are set out in the Soft Sand and Sharp Sand and Gravels Topic Papers 2018.

In response to the Call for Sites, 19 mineral sites were promoted for consideration, nine of which were selected as 'Options,' i.e. sites that were considered potentially suitable for allocation in the Kent Minerals Sites Plan, subject to public consultation and detailed technical assessment work. The Site Options subjected to detailed technical assessment (DTA) for soft sand were:

Site Ref	Soft Sand Sites	Estimated reserve
M3	Chapel Farm, Lenham	3.2mt
M8	West Malling Sandpit, Ryarsh	3.1mt (and 0.5mt of silica sand)

During the DTA stage, the promoter amended the Chapel Farm site to remove the eastern parcel of the promoted site and minor revisions to the access route onto the A20. Further information was also provided by the promoter of Site M8 indicating where the mineral would be excavated.

The Site Options for sharp sand and gravel were:

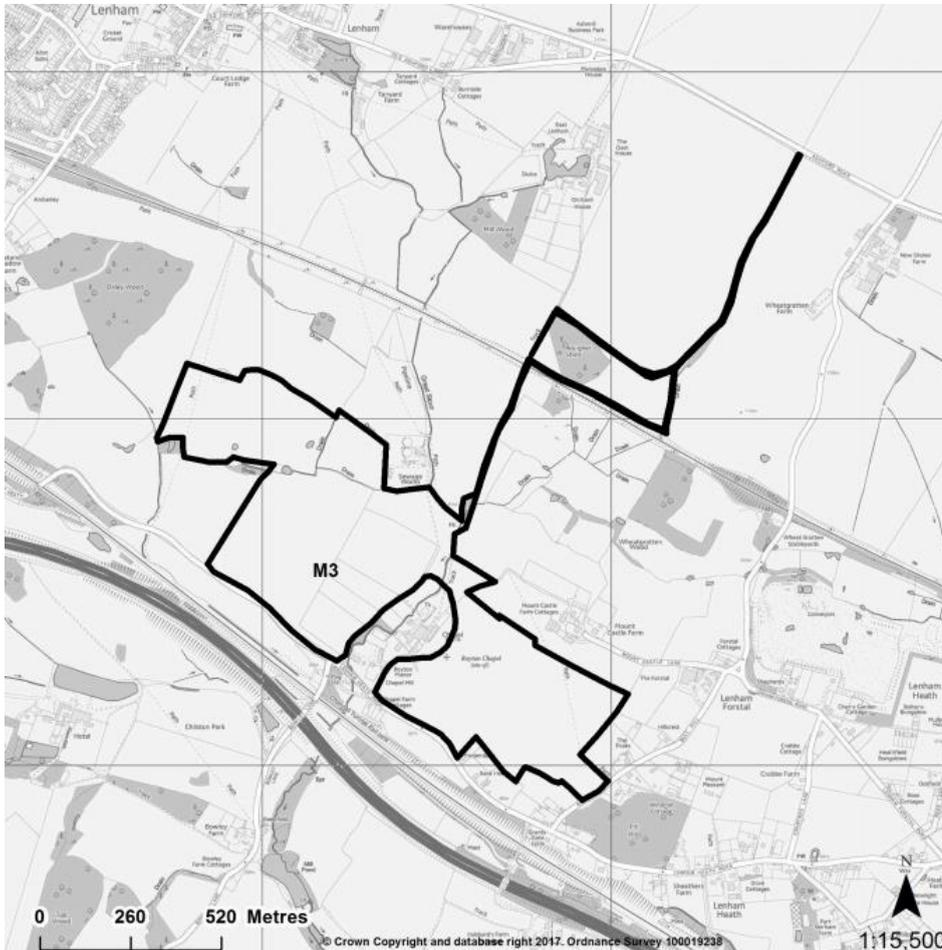
Site Ref	Sharp Sand and Gravel Sites	Estimated reserve
M2	Lydd Quarry/Allen's Bank Ext, Lydd	3.1mt
M7	Central Road, Dartford	0.9mt
M9	The Postern, Capel	0.6mt
M11	Joyce Green Quarry, Dartford	1.5mt
M13	Stonecastle Farm Quarry Ext, Hadlow/Whested	1.0mt
M12	Postern Meadows, Tonbridge	0.23 mt
M10	Moat Farm, Five Oak Green, Capel	1.5mt

During the DTA stage, The Postern, Capel site (M9) was withdrawn from further consideration by the site's promoter.

Full details of the nine sites that progressed to the DTA stage and the assessment conclusions are set out in the section below.

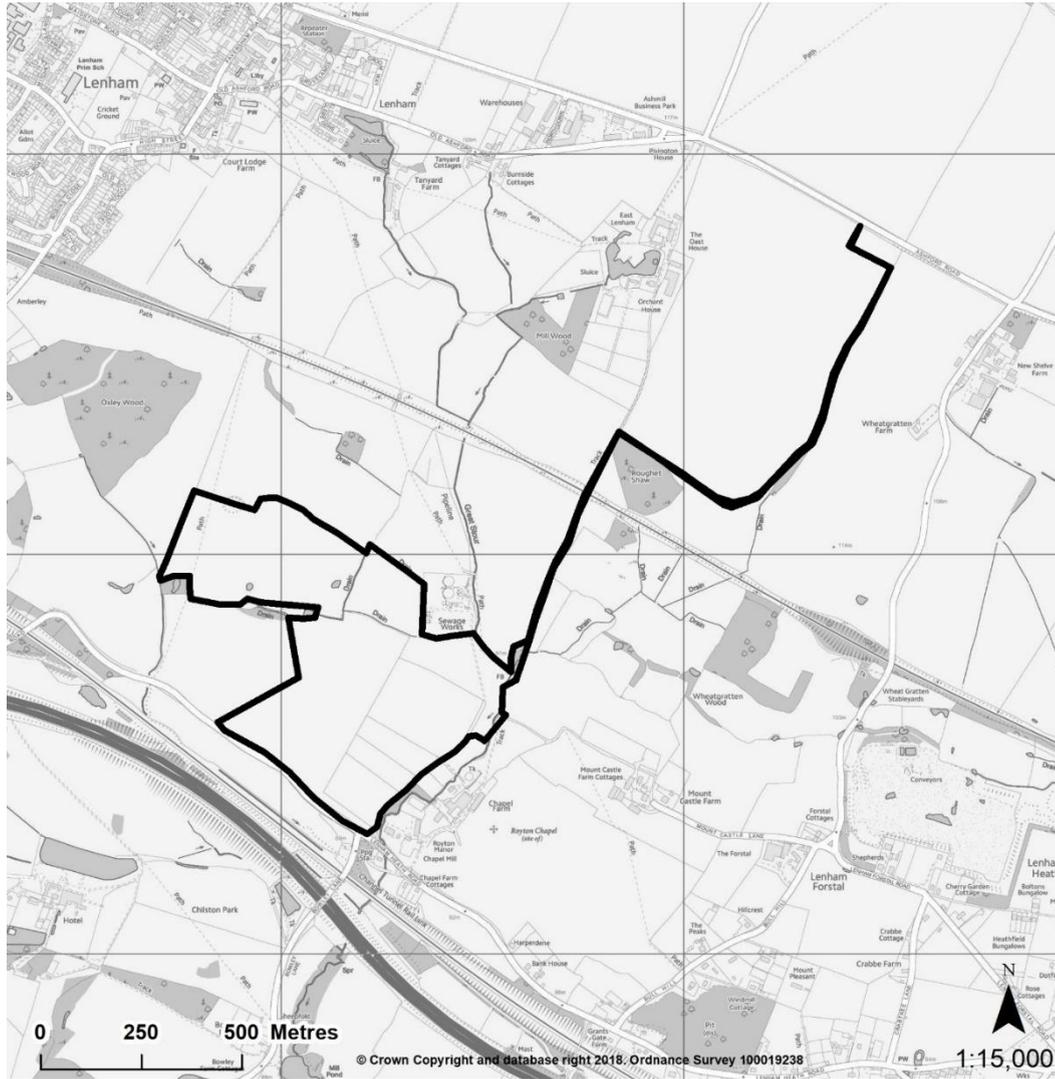
M3: Chapel Farm, Lenham - Soft Sand

Initial Site Location Plan as Originally Promoted



Site Location Plan as revised September 2018 - (Chapel Farm West, Lenham)

Note that the eastern parcel has been withdrawn by the promoter



1.0 Matters addressed by Detailed Technical Assessment

Initial Assessment

As set out in section 3 of this report, the initial assessment of the site¹ identified a number of matters which would require particular consideration, these were:

- Impact on landscape and particularly the Kent Downs Area of Outstanding Natural Beauty (AONB)
- Impact on biodiversity
- Feasibility of new access and impact of this on the highway network
- Impact on heritage, both archaeology and historic built environment
- Impact on Public Rights of Way (PROWs)
- Loss of grade 3 quality soil
- Impact on services and utilities such as the railway line and the wastewater treatment works (WWTW)
- Impact on local amenity
- Cumulative impact with other development in the area, including other quarrying operations and developments planned by Maidstone Borough Council.

Matters Raised during the Options Consultation

The matters raised during the public consultation on this site are summarised below.

Views of Key Organisations

A summary of the responses from key organisations, including statutory consultees, is set out below which sets out the nature and extent of the concerns of such consultees especially with regard to the matters listed above. It should be noted that the views expressed were received prior to the withdrawal of the eastern part of the promoted site and therefore relate to the site as originally promoted.

Environment Agency (EA)

Any future application will need to be accompanied by an Environmental Impact Assessment with emphasis towards demonstrating the relationship between the upper reaches of the Great Stour (including its associated tributaries, both ephemeral and perennial) during the site's operation and subsequent restoration. Appropriate mitigation measures, substantiated through a detailed programme of monitoring, will be necessary to demonstrate that the workings will not have a detrimental impact on the following:

- Hydraulic continuity between those reaches of the Great Stour and associated tributaries, if proven to be in part dependent on groundwater baseflow originating from the adjoining aquifer (Folkestone Formation).
- The hydraulic integrity of the river is not compromised. In particular, the proposed plans will need to recognise the function of the foremost transient reaches of the Great Stour, which are dependent on both chalk escarpment seepage and surface runoff contributions, where

¹ See Mineral Site Selection – Initial Assessment - Stages 1 and 2 of the Site Identification and Selection Methodology, November 2017 and reproduced in section 2 and 3 of this document

underlain by Gault Clay to the immediate north of Chapel Farm. Any submission will need to account for this 'contribution', and the plans cannot allow the Great Stour to become hydraulically 'isolated' from its headwaters, irrespective of whether those watercourses are quantified as ephemeral.

- The underlining Sandgate Formation is not compromised, especially if the Formation is shown to be acting as an aquiclude at Chapel Farm, and within the immediate vicinity. Such a response is required to protect the Hythe Formation, which is classified as a major water resources aquifer unit.

Other EA comments:

- Lenham WWTW is immediately upstream of the proposed workings, which has a potential relevance given that the discharge will be dependent on flow.
- A licence would be required from the Environment Agency should there be a requirement to dewater the site.

Natural England – The site is in proximity to two SSSI's designated for their geological interest. Their distance from the site means it is unlikely to have an impact however advice should be sought.

The proposed allocation is in close proximity to the Kent Downs AONB and the proposal should be assessed carefully to determine whether the development would cause significant impact or harm. Views of the AONB unit should be taken into consideration.

If the proposal will result in the loss of the Ancient Woodland and partial loss of deciduous woodland habitat, it must be demonstrated that there are no alternative sources of the material from sites with less environmental impacts.

Highways England

Some sections of the Strategic Road Network (SRN) within Kent are currently congested, particularly during peak hours and at other times operate under considerable levels of stress. Accordingly, the construction and operational impacts of the identified Minerals sites on the SRN need to be considered, both individually and cumulatively in order to for us to be satisfied that the proposals will not materially affect the safety, reliability and/or operation of the SRN (the tests set out in DfT C2/13 and DCLG NPPF para 32).

No specific comment on Chapel Farm.

Historic England

No specific comment on Chapel Farm. Advice should be sought from county council specialist advisors.

Surrey County Council - Supports inclusion of two soft sand sites as this will give a surplus of soft sand over the plan period and recognises that soft sand supplies in Kent are relatively abundant whereas other parts of the southeast are constrained by protective designations such as AONBs and National Parks.

East Sussex County Council (ESCC) - Paragraph 2.12 of the Kent Minerals Sites Plan (Options document) recognises the role that Kent soft sand plays in the South East of England and states that the proposed two soft sand sites would provide a surplus which may help meet increasing demand in other areas and for exports. There is a shortage of soft sand within the South East, all of the soft

sand within East Sussex is within the South Downs National Park which is highly constrained.

In the absence of sources to meet the constructional needs of East Sussex within East Sussex, it is hoped imports of soft sand from Kent can continue. ESCC Strongly supports the two sites put forward for allocation.

West Sussex County Council (WSSC) - pleased to note that two suitable sites have been identified for allocation, which will meet the calculated shortfall of 1.9 million tonnes as set out in Kent's LAA. The sites identified would provide around 7.1mt, therefore a surplus of around 5 million tonnes of soft sand. A surplus allocation in Kent would provide some certainty that the shortfall in soft sand supplies in West Sussex could be met from beyond West Sussex where the resource is constrained by the South Downs National Park.

Due to the unique constraints in the South East, allocation of the two sites (Chapel Farm & West Malling) would be justified as it would reduce reliance as a whole in the South East of extraction from protected areas, such as the South Downs National Park. NPPF Paragraph 145 requires MPAs to make provision, taking account of the advice of the AWP. The South East AMR shows that there are supply issues in the South East, therefore it would be justified to consider allocating a surplus through the Kent Mineral Sites Plan.

South Downs National Park (SDNPA) – The key issue is the provision of soft sand as the main source of sand is within the SDNP and heavily constrained. SDNPA is keen to work with authorities in the wider area to ensure that soft sand is identified and able to be worked in the most sustainable locations.

In line with national policy and guidance, particularly NPPF paragraphs 114, 115 and 116 and the additional guidance in the PPG, the SDNPA supports:

- the statements included in paragraph 2.12 about the relative abundance of soft sand within Kent and the constraint on resources particularly within national parks; and
- the proposed allocation for two soft sand sites within the proposed options for the KCC Minerals Plan.

Maidstone Borough Council – Maidstone BC identifies Lenham as a “broad location” for some 1000 dwellings to be delivered from 2021 onwards. Lenham Parish Council is also preparing a Neighbourhood Plan which will include site specific allocations for development. Impact of traffic movements on the A20 should therefore take account of the planned growth for the area.

The quarrying activities or the proposed haul road could be extremely detrimental to the Ancient Woodland and impacts need to be assessed and avoided if possible including consideration of a buffer. A felling licence for coppicing of East Lenham Roughett was granted in 2012 which indicates that the woodland is currently being appropriately managed to optimise its biodiversity value and longevity.

Lenham Heath & Chilston Park Local Wildlife Site (LWS) is adjacent to the proposed site, as is Bull Heath Pit LWS. Proposals must be assessed for any adverse impacts on these wildlife sites, including through disturbance caused by noise and traffic. There is also a stretch of trees within the LWS which are subject to a Tree Preservation Order (TPO).

The nearby listed buildings include Royton Manor (Grade II*) and Chapel Mill (II) (both situated between the eastern and western segments of the site), Vine House (II) (at the junction of Lenham

Heath Rd and Bull Hill) and Mount Castle Farm Cottage (II) (north of the site). If the extraction is shallow, open–cast then this may not have necessarily permanent implications for the listed buildings or their setting. Once extraction has been completed, the land in question may be backfilled and re-cultivated and re-landscaped to a high standard, secured via a legal agreement. Any re-landscaping should precisely attain the same contours in the land that exist today; improved biodiversity may also eventually be secured.

Extraction must not extend into established property boundaries or curtilages and should be confined to the interior spaces of the open fields only. Mature plantings or historic landscape features should also be avoided and worked around. There is the prospect of an adverse impact on the remains of a chapel which are denoted in the eastern field. The chapel site should remain untouched, and an appropriate boundary for this will need to be established. The chapel is not just a stand-alone asset and is very much linked to the adjacent properties, and to the significance of the landscape in which it sits.

Disturbance to the adjacent listed buildings and their low-specification foundations due to quarrying at the site should be considered as well as impacts caused by heavy lorries on footings and poorly bonded masonry that often characterises vernacular buildings. Heavier machinery (30 tons) could be accommodated within the site and away from properties, and a management agreement could be drawn up to this end.

Both the eastern and western segments of the site are crossed by PROWs which would require diversion. The council's records also show the land to be of Grade 3 agricultural quality and this may require further site-specific assessment of its quality and the significance of any loss.

Lenham Parish Council

Concerns raised were those submitted in 2010 during an earlier consultation on mineral development in this location which suggested there would be adverse impacts on the following:

- Kent Downs AONB
- Listed buildings and registered parks and gardens
- Feature of archaeological interest
- Public Rights of Way
- Ancient Woodland
- Agricultural land
- A Site of Nature Conservation Interest

Southern Water – Lenham WWTW is adjacent to the north boundary of the site, the access road runs through the proposed site. Operational equipment at Lenham WWTW is in continual active use, therefore it is essential to maintain unhindered access to the WWTW via its access road at all times. Sewerage infrastructure also crosses the site which connects the southern areas of the catchment of the WWTW and requires protection. Diversion may be possible at the operator's expense, provided a feasible route is available. Further engagement should be sought with Southern Water as the development proposal progresses. Provided that appropriate policy provisions are made, this is not considered to be a fundamental constraint.

Public Health England– Risk of crystalline silica (quartz) exposure to members of the public is much lower than occupational exposure. Non-occupational exposure to quartz can occur through the use of certain cosmetics, paints, pet litter, and other household or craft items.

On mineral sites which are well managed with control measures in place to manage environmental concentrations of particulate matter off-site, concentrations remain below those associated with long or short-term impacts. However, additional detail would be needed (such as that which would be available at planning application stage) before further, site specific comments can be made.

Kent Downs AONB Unit – The site is within the setting of the Kent Downs AONB. Views to the south from the AONB were a principal reason for the designation and are a feature which merits protection – this means the impact of proposals on views from the AONB need careful consideration.

The part of the site west of Chapel Farm and the proposed haul route is particularly prominent from the AONB to the north, the North Downs Way national trail and other public rights of way and roads to the north of the A20. Due to the topography of the land and intervening vegetation the eastern part of the site is less prominent in views, although still partially visible.

A visual impact assessment should be undertaken prior to allocation to assess whether impacts can be satisfactorily mitigated.

Any application should carefully consider mitigating the impact of the haul route in addition to the area of minerals with careful consideration of method of working and phased restoration, to ensure that a large area is not open at any one time.

British Archaeological Trust - There appear to be extensive multi-period archaeological remains within the site and full investigations would be required at planning application stage and should include trial trenching which could lead to full excavation on some or all of the site. Consideration should also be given to the possibility that there might be archaeological deposits of sufficient importance to justify preservation in situ.

British Horse Society – The site is located on an Other Route with Public Access (ORPA) (which historic evidence suggests is an old road), it is adopted at each end but unadopted in the middle. This particular route has strategic importance with regard to vulnerable road users as it would provide one of the few safer links connecting the North Downs Way to the north with the lanes network to the south. This part of the Weald is in extremely short supply of PROWs so access to the Downs is of key importance. It is suggested that the route be designated as a restricted byway. It is understood that part of this route will form part of the quarry haul road, this is not ideal for leisure users, but local arrangements could be made on site as and when the haul route is in operation.

CPRE – Object to the allocation of the site for the following reasons:

- Impact on the Kent Downs AONB
- Adverse impact on listed buildings
- Disruption to PROW network
- Loss of grade 1 and 2 agricultural soil
- Adverse impact on archaeology
- Need for the material has not been justified
- Impact on the water environment and specifically the River Stour

Kent Wildlife Trust – Object to the site in the absence of information to demonstrate there will be no negative impact on the Ancient Woodland and the LWS “MA66 Lenham Heath and Chilston Park”.

RSPB – The site will result in the direct loss of Local Wildlife Sites and therefore share the Kent Wildlife Trust’s views on the site.

Forestry Commission – Site assessment has identified:

- Ancient Woodland is situated on the site
- Adjoining uses include nearby woodlands
- Ancient Woodland adjacent to the proposed route of the suggested haul road.

KCC Advisors

In undertaking this detailed assessment, advice has been sought from a range of technical specialists who advise the County Council on planning matters. This includes advice on biodiversity, Public Rights of Way, noise, air quality, landscape, heritage, water resources, stability and highway and transportation interests. The views received have informed the assessment and the discussion section below. Several related standalone specialist reports have been prepared and have been published as background documents. The work has also been informed by the Project’s Sustainability Appraisal work.

Views of Elected Representatives

Shellina Prendergast (County Member)

Considered that the site would result in adverse impacts affecting the following:

- Kent Downs AONB and wider landscape
- Local amenity due to noise and dust
- Highway – in particular the A20
- Ecology – in particular the River Stour
- Lenham Sewage Works
- Quality of agricultural land
- Heritage assets

Views of Local Residents

Concerns raised by local residents during the options consultation included:

- Impact on local amenity by way of noise, dust and vibrations
- Increased strain on local infrastructure such as the WWTW
- Impact on Ancient Woodland
- Impact on flora and fauna
- Significant archaeological remains within the site
- Proximity to listed buildings and Chilston Park (historic parks and gardens)
- Impact on equestrian activities
- Loss of the “Heaths Countryside Corridor” – a local community initiated and managed project
- Cumulative impact with other developments, Maidstone BC local plan has allocated housing in Lenham and surrounding villages
- Proximity to Kent Downs AONB
- Impact on PROWs, North Downs Way, Stour Valley Walk and Pilgrims Way.
- Loss of grade 2/3 agricultural soil
- Highways infrastructure not appropriate - should utilise rail sidings
- Impact on traffic congestion
- Impact on road safety for vehicles and pedestrians
- Unknown future demand of soft sand quantity and unknown quality of material
- Concerns over restoring land to lower level
- Impact on water environment including the Great Stour River

2.0 Sustainability Appraisal

In accordance with statutory requirements a sustainability appraisal (SA) has been completed which considers how well the site performs against certain sustainability objectives. The detailed results of the SA are set out in a separate document.

3.0 Discussion

This section addresses matters raised above as well as those identified during the initial site assessment which are key to assessing the suitability of the site for allocation in the Kent Minerals Sites Plan.

Amenity

The promoted site has been assessed against policy DM11 of the KMWLP which requires that mineral development should not generate unacceptable impacts from noise, dust, vibration, odour, emissions, illumination, visual intrusion, traffic or exposure to health risks and associated damage to the qualities of life and wellbeing to communities and the environment. Similar policy protection is provided within the NPPF.

The location of the site is remote and rural and away from any Air Quality Management Areas (AQMAs) and any significant area of residential development. There are a small number of residential properties which surround the deallocated parcel of land to the east of Chapel Farm, these are the properties on Lenham Heath Road, Bull Hill and Mount Castle Lane. The nearest settlement is Lenham Heath which is a hamlet east of the allocation. The closest residential property to the allocated site (the western parcel) is approximately 150m away and the distance from any excavation would likely be further in light of the anticipated stand-offs surrounding the Chapel Farm heritage feature.

The noise climate is likely to be heavily influenced by transportation noise, particularly from the M20 but also from Lenham Heath Road and the two railway lines. Therefore, ambient noise is likely to be very low which makes mitigation more achievable.

Sources of air pollution are likely to be background dusts from agriculture, some transboundary air pollution and NO₂ particulates from the M20 and local road traffic. Public Health England have raised no specific objection to the site, advising that on mineral sites which are well managed with control measures in place to manage environmental concentrations of particulate matter off-site, concentrations remain below those associated with long or short-term impacts. However, additional detail would be needed (such as that which would be available at planning application stage) before further, site specific comments can be made.

Properties could potentially be impacted by noise, dust and vibrations resulting from operations at the site and HGV emissions but, with mitigation, it is considered that impacts will not reach unacceptable levels. The level of impacts to receptors east of the site will be significantly reduced due to the eastern parcel being removed from the allocation. In light of its distance from the site it is considered unlikely that Lenham Heath will experience unacceptable impacts. Mitigation against any adverse air quality impacts should be fully achievable, however the Maidstone AQMA (to the east of Maidstone Town) could be a constraint depending on the type and number of HGVs that access it.

The County Council's assessment of the potential amenity impacts concludes that mitigation would be achievable. It is therefore concluded that any amenity impacts associated with the operations of the site can be satisfactorily mitigated in a manner similar to other quarrying operations in the vicinity of residential development.

Highways and Transportation

The proposed site has been assessed against policy DM13 of the KMWLP which requires that minerals development satisfy that the access arrangements are not detrimental to road safety, that the highway network is able to accommodate the traffic flows and will not give rise to unacceptable impact on the environment or local community and that emission control and reduction measures are proposed, particularly within an AQMA. Similar policy support is provided for within the NPPF.

The site does not benefit from direct access to the highway network and requires a new access to be created. This proposed access is shown in the site location plan; it spans north from the proposed working area, across the railway line, and meets the A20 Ashford Road. In the initial site submission, the access track was proposed to line the edge of the land in the control of the landowner. This was deemed to be unacceptable as it did not allow sufficient room for visibility splays to be maintained. The proposed access has been moved westward so that the visibility splays can be accommodated by land in the control of the landowner. Utilisation of the railway is not considered practical by the site promoter but this would require further more detailed consideration at the planning application stage.

The Local Highway Authority raises no objection to the principle of the development. It advises that the A20 is part of the primary route network which is appropriate to accommodate HGV movements. It is considered that the level of additional vehicle movements is likely to be very low and that the A20 would be able to accommodate the additional traffic without adverse impacts. A new access onto the A20 would require careful design with appropriate visibility splays. The new access directly onto the A20 will negate any need for access to the site via rural roads in the area.

In terms of cumulative impacts on the highway network with other planned development in the area (For example, the village of Lenham and nearby Harrietsham are proposed to be expanded within Maidstone Borough Council's Local Plan (adopted October 2017)), it is considered that the development would not result in the addition of significant vehicle numbers to the highway network. Further information regarding forecasts and impact on the road network would be required and assessed as part of a transport assessment in support of a planning application.

Although invited, no specific concerns have been raised by comments have been received from Highways England on this site.

In light of the above, it is considered that the site can be operated in a way which would not cause an unacceptable adverse impact on the highway network.

Biodiversity

The proposed site has been assessed against policy DM3 of the KMWLP which requires that proposals do not result in unacceptable adverse impacts on Kent's important biodiversity assets and SSSIs. This policy was prepared in line with the NPPF which sets out similar criteria.

The site is predominately arable, and the fields are surrounded by hedgerows and there is a small copse (with ponds) in the west of the site which is the feature of most ecological interest. An area of

Ancient Woodland (Roughetts Shaw) sits to the north of the area of working next to the proposed access track. The site is located within the upper reaches of the Great Stour. Lenham Quarry SSSI is approximately 800m from the site and Hart Hill SSSI is 2.5km away; both are designated for their geological interest. Lenham Heath & Chilston Park and Bull Heath Pit Local Wildlife Sites (LWS) are adjacent to the proposed site. Trees within the LWS are subject to a Tree Preservation Order (TPO).

KCC Biodiversity officers advised that should the site boundary include the Ancient Woodland, and should it be disrupted in anyway, this would afford the site a very high level of ecological constraint. Other bodies such as Natural England, Maidstone Borough Council and Kent Wildlife Trust objected or also raised concern about this matter. Given the concern, the Ancient Woodland has now been removed from the site boundary. However, the haul road will run adjacent, so policy provision must be made to ensure that no negative impacts occur as an indirect result of the development. This will include maintaining a buffer of at least 15 metres. The woodland copse to the west of the site would be similarly protected.

The Environment Agency objected to the site due to lack of information on how the operations will impact the ecology of the River Stour. However, these comments were based on the eastern parcel of the site still being included. Now that the eastern parcel has been removed, there will be no direct impact on the River.

The nature of the SSSIs and their distance from the site means that they are unlikely to be adversely impacted but this is a matter that will require further consideration if a planning application were to be made.

A number of BAP Priority Habitats and LWSs are located adjacent to the site but these do not present any major level of ecological concern that cannot be dealt with as part of the planning application process.

The proposed low-level restoration of the site will provide an opportunity to create habitat and enhance the biodiversity of the area.

Should an application come forward there will be a need for appropriate surveys of the ecology to be carried out, and specialist advice will be sought with regard to working arrangements and restoration proposals to ensure that features are not adversely impacted and, ultimately biodiversity enhancements are secured. In principle, it is considered there to be no material reason to not allocate the site due to adverse impacts on biodiversity.

Historic Environment

The proposed site has been assessed against policy DM5 of the KMWLP which requires that there should be no unacceptable adverse impact on Kent's historic environment taking account of mitigation and compensation and heritage assets be conserved in a manner appropriate to their significance. This policy was prepared in line with the NPPF which sets out similar criteria.

Nearby listed buildings include Royton Manor (Grade II*) and Chapel Mill (II) (both situated between the eastern and western segments of the site), Vine House (II) (at the junction of Lenham Heath Rd and Bull Hill) and Mount Castle Farm Cottage (II) (north of the site).

Cultural Heritage would need to be addressed through a multi-phased programme both desk-based and field work, with mitigation fully informed and appropriate to the significance of the heritage

assets affected. Taking account of the removal of eastern parcel from the allocation, it is considered that mitigation is possible to ensure local heritage assets, particularly the listed buildings within close proximity to the site, are protected from unacceptable impacts.

Archaeology

KCC Archaeological officers raised concern over the site as originally promoted as they consider that the archaeological interest, is so significant that it would be necessary to preserve the feature in situ and that impacts may not be mitigatable to an acceptable level. None of the land in this area would therefore be suitable for extraction. In light of this the site promoter has formally withdrawn this parcel so that only the land to the west of the Chapel Farm complex be included.

Historic England has been consulted on the proposal to allocate this site for mineral working and it has not raised any specific concerns.

With the omission of the eastern parcel of land, it is considered that the potential for archaeology within the remainder of the site is not sufficient to justify non-allocation.

Water Environment

The proposed site has been assessed against policy DM10 of the KMWLP which requires that development should result in no deterioration and improved ecological status of all waterbodies within the site and/or hydrologically connected to the site. This policy was prepared in line with the NPPF.

The site has no impact on flood risk.

There is a watercourse to the northern part of the site which forms part of the Great Stour. The relationship with this will need to be fully explored as part of an EIA and monitored throughout the life of the site.

It is considered that any impact on the water environment can be satisfactorily addressed as part of the planning application process through further consultation with the EA and other consultees where necessary.

Land Stability

The proposed site has been assessed against policy DM18 of the KMWLP which expects that planning permission for development will not be granted unless it is demonstrated that development will not result in land instability. This policy was prepared in line with the NPPF.

The County Council's land stability report includes consideration of the site's proximity to sensitive receptors such as sewage lines, electricity pylons and the railway line. It is considered that impacts on these features can be mitigated with appropriate standoffs and diversion where necessary. A suggested standoff is 45 metres but this will be determined by quantitative slope stability assessment to be submitted with any planning application.

Soil Quality

The proposed site has been assessed against policy DM1 of the KMWLP which requires that proposals demonstrate that there is no unacceptable adverse impact on the use of other land for other purposes. This policy was prepared in line with the NPPF.

Natural England's Agricultural Land Classification Map states that the site contains Grade 3 (Good to

Moderate) soil. It is considered that while mineral extraction would result in a loss of this soil such a loss would be temporary as the site would be restored to agricultural land.

PROW

The proposed site has been assessed against policy DM14 of the KMWLP which requires that where proposals impact a PROW, they will only be permitted if; satisfactory prior provisions for diversion of the PROW can be made which are convenient and safe for the PROWs users, an acceptable alternative route can be provided during operations and restoration, and opportunities to improve countryside access are taken wherever possible. This policy was prepared in line with the NPPF which sets out similar criteria.

There were several PROWs running through the eastern parcel of the site, however as this has been withdrawn, the allocation would not have any impacts on access provided by these PROWs.

Other footpaths run adjacent to the west of the site, and to the north, with one crossing the proposed haul route. It is considered that diversions and screening can mitigate any impact on the PROW network as necessary.

Services and Utilities

The proposed site has been assessed against policy DM11 of the KMWLP which requires that proposals demonstrate that there is no unacceptable adverse impact on the use of other land for other purposes. This policy was prepared in line with the NPPF.

Lenham sewage works are situated adjacent to the site and a sewer line cuts through the site. Consultation with Southern Water has not revealed any insuperable obstacles to development of the site which arise as a result of this infrastructure. Power lines cross the western section of the site, but this area is no longer proposed for allocation.

Landscape and Visual Amenity

The proposed site has been assessed against policy DM2 of the KMWLP which aims to ensure that there are no unacceptable adverse impacts on important landscapes, including the Kent Downs AONB, and sets out the circumstances where impacts upon them would be acceptable. Policy DM2 notes that proposals outside, but within the setting of an AONB will be considered having regard to the effect on the purpose of conserving and enhancing the natural beauty of the AONB. This policy was prepared in line with the NPPF which sets out similar criteria. Impacts on visual amenity are assessed against policy DM11 that seeks to ensure that minerals development is unlikely to generate unacceptable adverse impacts from visual intrusion.

The site is approximately 1.5km to the south of the Kent Downs AONB and is considered be within its setting.

A landscape assessment has been carried out which concluded that whilst mineral working will have an impact on the long-range views from the AONB, these will likely not be significant.

The proposal was also assessed as likely to have an impact on the views from PROWs and residential properties surrounding the site. However, this was based on the site when the eastern parcel was included. As this has now been removed, residential properties are now further away from any mineral working and so the level of impact will be significantly reduced.

The Kent Downs AONB Unit stated that subject to the requirement for mitigation being included in

any policy provision for the site, they did not object.

Mitigation would be provided by existing screening, including hedges on the boundaries of the site, and this could be enhanced with additional planting including trees where appropriate. In particular screening should address the exposed properties along Lenham Heath Road.

Subject to considerable attention being given to inclusion of appropriate and acceptable mitigation, it is considered that the site could be developed without causing unacceptable impacts on the landscape.

Need for the mineral

The proposed site has been assessed against policy CSM2 that sets out the requirements for the supply of soft sand and silica sand. This policy was prepared in line with the NPPF.

Calculations regarding supply and demand based on 2017 data, taken together with an 18-year landbank, suggest the shortfall is now in the order of 2.5mt for soft sand². The yield from this site is estimated to be 3.2mt.

The site is part of the Folkestone Formation (part of the Lower Greensand Group) and the economically important aggregate yielding geological unit, a loosely consolidated to unconsolidated marine (ancient beach) sand that is a unique part of the geological succession in Kent and the wider South East. The material is generally free of contaminants (in its purest form it is referred to as 'silica sand') and is of a particle shape and size consistency that makes it suitable as a mortar sand and its flow characteristics are such that it is often referred to a 'soft sand', it is also used as a constituent in coated stone production, or asphalts.

An alternative to the land-won soft sands, that will provide a steady and adequate supply as required by the National Planning Policy Framework, is unavailable at this time.

Neighbouring authorities support the allocation of sites suitable for the development of soft sand on the basis that this would help address a wider issue that the vast majority of soft sand in the unconstrained south east is being progressively exhausted, and much of what remains is constrained by designations such as AONB's or National Parks (such as the South Downs).

At this time, however there is no evidenced need to demonstrate a case to make significant over provision in Kent to meet a regional need.

Cumulative Impact

The proposed site has been assessed against policy DM12 of the KMWLP which expects that mineral development should not result in an unacceptable adverse, cumulative impact on the environment or communities. This policy was prepared in line with the NPPF which sets out similar criteria.

It is recognised that mineral working has taken place in the surrounding area in the past. The KMWLP notes that cumulative impacts may occur where separate developments occur near to each other and there is a need for such impacts to be taken into account. The assessment of potential impacts which could arise from development in this location has not revealed that unacceptable cumulative impacts would arise, however cumulative impacts will require further consideration if a proposal were to come forward.

² See Soft Sand Topic Paper 2018

4.0 Conclusion - M3: Chapel Farm (West Site), Lenham

It is considered that the significant amendment to the site boundary (removal of the eastern parcel) addresses many of the issues associated with mineral working in this location including access, biodiversity and archaeology. The impact on amenity will also be reduced as residential properties are now further away from the proposed mineral working.

It is considered that other matters can be addressed and satisfactorily mitigated through the normal planning application process, seeking further views of consultees and technical advice where appropriate. It is noted that the site is currently allocated for mineral working by saved policy CA6 in the Kent Minerals Local Plan: Construction Aggregates 1993.

Therefore, it is considered that the site should be allocated with a requirement that any application demonstrates compliance with the development management considerations, with particular reference to:

Biodiversity

- At least a 15 metre buffer to be maintained around the Ancient Woodland at all times
- Lenham Quarry SSSI is approximately 800m from the site and Hart Hill SSSI is 2.5km away; both are designated for their geological interest. Lenham Heath & Chilston Park and Bull Heath Pit Local Wildlife Sites (LWS) are adjacent to the proposed site. Evidence to be submitted with any planning application to confirm that the LWS and SSSIs will not be adversely impacted
- Woodland copse to the north-west corner of the site must be maintained

Landscape

- Detailed information setting out proposed mitigation of visual impacts and demonstrating that the setting of the Kent Downs AONB will not be adversely impacted

Heritage

Nearby listed buildings include Royton Manor (Grade II*) and Chapel Mill (II), Vine House (II) and Mount Castle Farm Cottage (II). Consideration and mitigation of impacts on heritage assets including listed buildings is required.

Water Resources

- Any application will need to be accompanied by an EIA with particular emphasis on the site's relationship and impact on the Great Stour
- Appropriate mitigation measures and monitoring will need to be implemented as per the request of the Environment Agency, to demonstrate the following:
 - Hydraulic continuity between those reaches of the Great Stour and associated tributaries, if proven to be in part dependent on groundwater baseflow originating from the adjoining aquifer (Folkestone Formation).
 - The hydraulic integrity of the river is not compromised. In particular, the proposed plans will need to recognise the function of the foremost transient reaches of the Great Stour, which are dependent on both chalk escarpment seepage and surface runoff contributions, where underlain by Gault Clay to the immediate north of Chapel Farm. Any submission will need to account for this 'contribution', and the plans cannot allow the Great Stour to become hydraulically 'isolated' from its headwaters, irrespective of whether those watercourses are quantified as ephemeral.

- The underlining Sandgate Formation is not compromised, especially if the Formation is shown to be acting as an aquiclude at Chapel Farm, and within the immediate vicinity. Such a response is required to protect the Hythe Formation, which is classified as a major water resources aquifer unit.

Transport and Access

- A detailed transport assessment to demonstrate compliance with KMWLP Policy DM13.
- The Transport Assessment should consider ability to access the site via rail, impacts on the A20 and the Maidstone AQMA and show how any potential adverse impacts on this AQMA will be mitigated.

Utilities

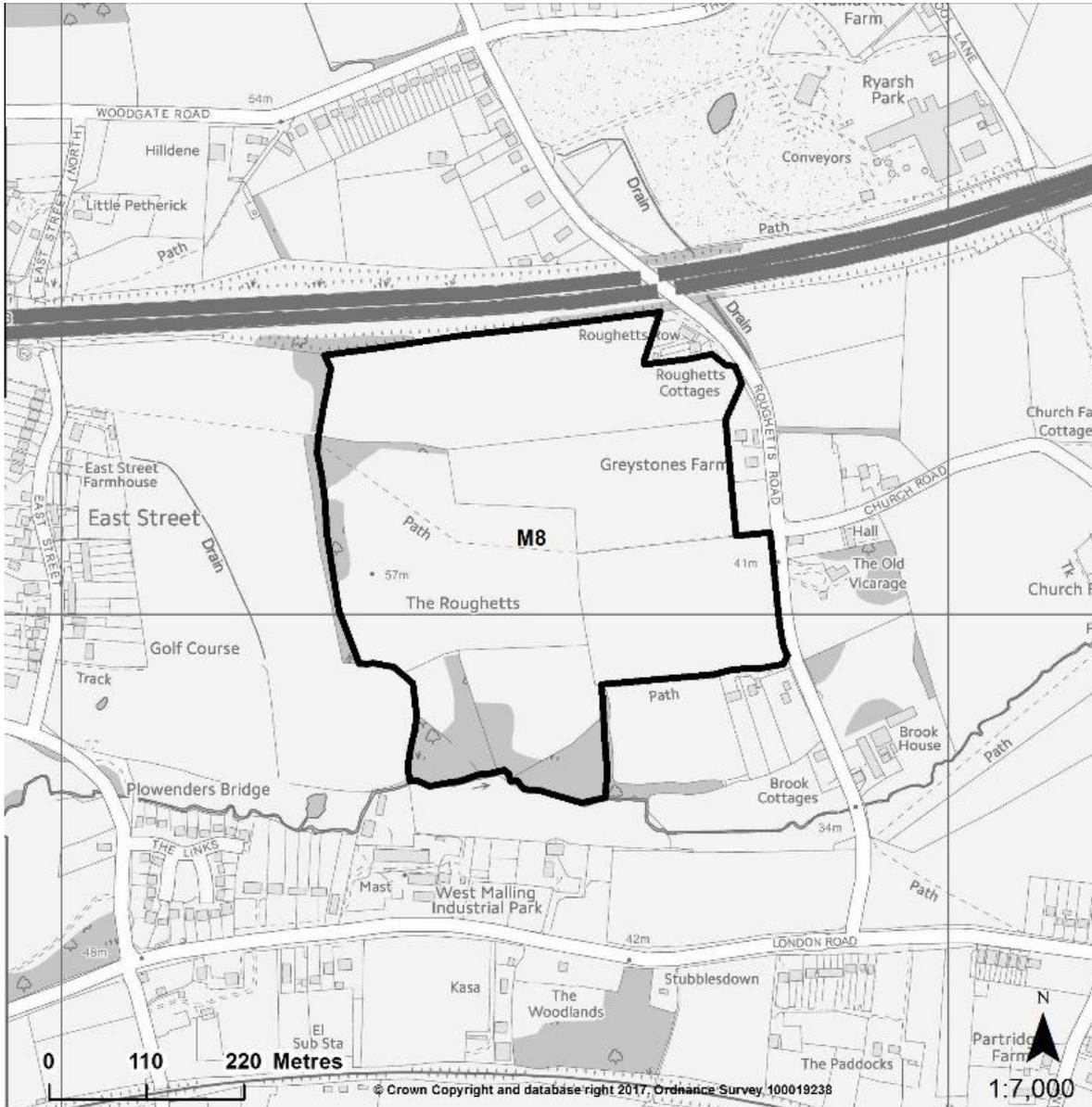
- Demonstration that sensitive receptors such as sewage lines, electricity pylons and the railway lines will not be affected by land instability caused by the development.
- The functioning of the Lenham WWTW and other sewerage infrastructure must not be adversely impacted

Health and Amenity

- Compliance with policy DM11 of the Kent Minerals and Waste Local Plan in respect of health and amenity.
- A lighting, noise, dust, and vibration management plan should be completed, setting out how unacceptable impacts will be avoided. A detailed dust assessment and management plan should be submitted which follows best practice and any national Government guidance (e.g. Planning Practice Guidance)

M8: West Malling Sandpit, Ryarsh - Soft Sand (and 0.5mt silica sand)

Site Location Plan



M8: West Malling Sandpit, Ryarsh - Promoter's Indicative Proposal for Working the Site



1.0 Matters addressed by Detailed Technical Assessment

Matters Identified by the Initial Site Assessment

As set out in section 3 of this report, the initial assessment of the site identified a number of matters which would require further consideration, these were:

- Impact on landscape and the Kent Downs Area of Outstanding Natural Beauty (AONB)
- Impact on biodiversity
- Impact on historic environment
- Impact on water environment
- Loss of grade 3 quality soil

- Impact on local amenity
- Impact on the Green Belt
- Impact on Public Rights of Way (PROWs)
- Impact on utilities/services
- Access to the site and associated impacts on the highway network
- Cumulative impacts with other developments and quarrying operations within the area

Matters Raised During the Options Consultation

The matters raised during the public consultation on this site are summarised below.

Views of key organisations

A summary of the responses from key organisations, including statutory consultees, is set out below which sets out the nature and extent of the concerns of such consultees especially with regard to the matters listed above.

Environment Agency – No objection in principle.

The site is located in SPZ3, so waste activities should be avoided.

As the proposal includes the importation of inert waste to restore the site to existing levels, this will require an environmental permit.

No concerns regarding flood risk.

Any application would need to be accompanied by an Environmental Impact Assessment with emphasis towards demonstrating the relationship between the reach of the Leybourne Stream that bounds the southern flank of the proposed working.

Appropriate mitigation measures, substantiated through a detailed programme of monitoring, will be necessary to demonstrate that the workings will not have a detrimental impact on the following:

- Hydraulic continuity between susceptible reaches of the Leybourne Stream, if proven to be in part dependent on groundwater baseflow originating from the adjoining aquifer (Folkestone formation)
- The underlining Sandgate Formation is not compromised, especially if the Formation is shown to be acting as aquiclude at West Malling Sandpit, and within the immediate vicinity. Such a response is required to protect the Hythe Formation, which is classified as a major water resources aquifer unit.

Dependent on the proposed ways of working, Abstraction License 9/40/02/0020/SR potentially could be at risk of derogation, being located approximately 250m to the north west of the northern most curtilage of the quarry.

A licence should be sought from the Environment Agency should there be a requirement to dewater the site.

Natural England – The site is within the setting of the Kent Downs AONB, therefore views of the AONB unit should be taken into consideration. A Landscape and Visual Impact Assessment (LVIA) will be required with any planning application.

The site is within the Impact Risk Zone (IRZ) for the Trottiscliffe Meadows SSSI, therefore extraction would need to avoid any hydrological impacts on the SSSI.

Highways England - Would have concern if the site affected the drainage, land or structure of the Strategic Route Network.

Historic England - No specific comment

Public Health England– Risk of crystalline silica (quartz) exposure to members of the public is much lower than occupational exposure. Non-occupational exposure to quartz can occur through the use of certain cosmetics, paints, pet litter, and other household or craft items.

On mineral sites which are well managed with control measures in place to manage environmental concentrations of particulate matter off-site, concentrations remain below those associated with long or short-term impacts. However, additional detail is required (such as that which would be available at planning application stage) before further, site specific comments can be made.

Surrey County Council - Supports inclusion of two soft sand sites as this will give a surplus of soft sand over the plan period and recognises that soft sand supplies in Kent are relatively abundant whereas other parts of the southeast are constrained by protective designations such as AONBs and National Parks.

East Sussex County Council (ESCC) - Paragraph 2.12 of the Kent Minerals Sites Plan (Options document) recognises the role that Kent soft sand plays in the South East of England and states that the proposed two soft sand sites would provide a surplus which may help meet increasing demand in other areas and for exports. There is a shortage of soft sand within the South East, all of the soft sand within East Sussex is within the South Downs National Park which is highly constrained.

In the absence of sources to meet the constructional needs of East Sussex within East Sussex, it is hoped imports of soft sand from Kent can continue. ESCC Strongly supports the two sites put forward for allocation.

West Sussex County Council (WSCC) - pleased to note that two suitable sites have been identified for allocation, which will meet the calculated shortfall of 1.9 million tonnes as set out in Kent's LAA. The sites identified would provide around 7.1mt, therefore a surplus of around 5 million tonnes of soft sand. A surplus allocation in Kent would provide some certainty that the shortfall in soft sand supplies in West Sussex could be met from beyond West Sussex where the resource is constrained by the South Downs National Park.

Due to the unique constraints in the South East, allocation of the two sites (Chapel Farm & West Malling) would be justified as it would reduce reliance as a whole in the South East of extraction from protected areas, such as the South Downs National Park. NPPF Paragraph 145 requires MPAs to make provision, taking account of the advice of the AWP. The South East AMR shows that there are supply issues in the South East, therefore it would be justified to consider allocating a surplus through the Kent Mineral Sites Plan.

South Downs National Park (SDNPA) – The key issue is the provision of soft sand as the main source of sand is within the SDNP and heavily constrained. SDNPA is keen to work with authorities in the wider area to ensure that soft sand is identified and able to be worked in the most sustainable locations.

In line with national policy and guidance, particularly NPPF paragraphs 114, 115 and 116 and the additional guidance in the PPG, the SDNPA supports:

- the statements included in paragraph 2.12 about the relative abundance of soft sand within Kent and the constraint on resources particularly within national parks; and
- the proposed allocation for two soft sand sites within the proposed options for the KCC Minerals Plan.

Tonbridge and Malling Brough Council – Noted that minerals can only be worked where they naturally occur and that minerals are an important material for construction.

The site does not conflict with the development strategy in the Borough Council's emerging Local Plan. The following matters should be given particular consideration when deciding whether or not to allocate the site:

- Impact on the amenity of nearby properties by way of noise, dust, vibration and lighting.
- Impact on the local highway network. Including the impacts upon the integrity of properties, pedestrian safety and air quality.
- Impacts on the Biodiversity Action Plan (BAP) habitat, Ancient Woodland and the SSSI.
- Water contamination.
- Impact on the Kent Downs AONB landscape designation

Ryarsh Parish Council – Strong objection on the following grounds:

Adverse impact on traffic:

- Road infrastructure (i.e. country roads) unsuitable to accommodate quarry traffic/HGVs, and the local road network is at full capacity already. This has become worse in recent years since the introduction of new housing developments such as Ryarsh Park and Leybourne Chase.
- Quarry traffic will use Ryarsh and Birling to get to or from the M20 or A20.
- The Roughetts Road and A20 junction is hazardous.
- Roughetts Road is only about 6 metres wide at one point and is too narrow for two lorries to pass safely. Vehicles will travel extremely close to pedestrians on the narrow pavement on Roughetts Road. Better lighting would be required.

Impact on air quality:

- Prevailing south west wind means dust from the sandpit will cover the whole area, including Ryarsh, Ryarsh Park and Leybourne Chase. There will be an unacceptable risk to health of residents due to silica dust e.g. risk of COPD and silicosis.
- Pollution will be caused by lorries travelling to and from the site.

Noise from digging, quarrying and from vehicle movements, especially in the summer and with prevailing winds will affect the locality. The site is so close to residential properties that mitigation to make the site acceptable is impossible. Parts of the village are already experiencing noise levels above WHO/EEA recommended levels.

The site would have an adverse impact on public rights of way which go through site as these will be lost - they are widely used and form a vital connection between Ryarsh and Addington.

There will be adverse cumulative impacts due to other quarries in the area.

The site is within the Green Belt and a quarry is inappropriate development in the Green Belt. TMBC Local Plan Green Belt Study September 2016 states that Ryarsh “retains a rural feel with open fields” and refers to “the smaller nature of the settlement”; “the village is small” and regarding openness has “a generally open landscape with open fields and a lack of urbanising features – a typical rural, Kentish landscape”.

There will be a detrimental impact on the landscape character. The site is within the Kent Downs AONB and would have an adverse impact on its setting.

There will be a detrimental visual impact on the local and wider landscape area. Impacts on views cannot be mitigated by landscaping due to the proximity of neighbouring properties, the A20 and Roughetts Road.

There are nationally important archaeological sites in the area including The Coldrum Stones, Addington Long Barrow and St Michael & All Angels Church in Offham. Quarry will damage heritage assets. St Martin’s Church, Ryarsh is the nearest to the site and will be most impacted. The proposal would affect a number of listed buildings in the vicinity of the site.

There will be adverse impact on the extremely important aquifer on the site.

There will be an adverse impact flora and fauna including ancient and BAP deciduous woodland.

There is no need for soft sand which can be sourced from existing sites and imported via wharves. Alternative materials could also be used. The calculation of need is incorrect. It must be possible to obtain purer silica sand from Surrey.

There is no need for new landfill and creating new voids in new quarries may create filling problems.

Objection to the initial screening assessment

Birling Parish Council – Objects to the potential allocation. The following grounds are raised:

- impact upon the surrounding communities and the locality – traffic, noise, dust, landscape and visual impact, green belt, public rights of way and cumulative impact
- the initial assessment process was flawed
- the extent of need for soft sand has not been fully justified

Addington Parish Council – Objects to the proposal. The following grounds are raised:

- impact of further quarry on local infrastructure and residential amenity is unacceptable
- impact upon heritage, landscape, ancient woodland and local amenity
- air quality impacts
- unacceptable traffic impacts
- need not proven

Kings Hill Parish Council –Strongly objects to the proposal on the following grounds:

- traffic impact
- impact upon amenity – dust, air quality, noise, PROWs and light pollution
- Impact on Green Belt
- Landscape impact

Supports the views of the many who have objected to the proposal

Leybourne Parish Council – Objects to the proposal. The following grounds are raised:

- Environmental Impact including air quality and health
- Inadequate transport infrastructure and impact upon local roads
- Existing traffic problems will be exacerbated

Offham Parish Council – Objection on the following grounds:

- Impacts from dust and health risks to the community
- Unacceptable impact on traffic and local roads
- Supports the objection from Offham Church and the need to protect this historic building

West Malling Parish Council – Concerns raised in respect of need, traffic, pollution and health risks and restoration of the site.

Kent Downs AONB Unit – The site is within the setting of the Kent Downs AONB. Views to the south from the AONB were a principal reason for the designation and are a feature which merits protection – this means the impact of proposals on views from the AONB need careful consideration. While views of the site from the AONB appear relatively limited, a visual impact assessment should be undertaken prior to allocation.

To avoid and minimise impacts on the AONB, appropriate and advanced landscaping would be needed as well as consideration of working methods to ensure a large area does not remain open.

Restoration to agricultural land, including reinstatement of hedgerows and hedgerow trees (to ensure restored levels are comparable with existing) would be supported.

PROW crossing the site which provide access to the AONB will need diversion.

Access to the site should be to/from the south to avoid use of rural lanes within the AONB to the north

CPRE – The allocation of the site is premature pending the outcome of the forthcoming Local Aggregates Assessment (LAA) and soft sand study.

Whilst the omission of extraction adjoining residential properties is welcomed, there is no indication that this part of the site will be safeguarded from extraction indefinitely. This assurance is necessary to avoid negative impacts on the residents.

The site is crossed by two footpaths which originate in a protected open space on the western boundary of the site; the West Malling Golf Club. Restoration should occur in tandem with the extraction to ensure that disruption to the footpaths is minimised. The site should also be restored to original land levels.

There are no details of any plant or buildings which would be required to serve the site. The site is within the Green Belt and whilst mineral extraction is not considered inappropriate development, associated activities such as processing and restoration may impact on the Green Belt's openness and would therefore need to demonstrate that very special circumstances exist to outweigh the harm to the Green Belt.

There is Ancient Woodland to the south of the site. Mitigation would be necessary to ensure that this and the BAP woodland remains intact. The extraction should also not adversely impact the water table which serves the Ancient Woodland.

Forestry Commission – will provide advice at the appropriate time to ensure that the most applicable measures are adopted to minimise and/or compensate for the impacts on Ancient Woodland.

Kent Wildlife Trust - Object to the site in the absence of information which demonstrates that the Ancient Woodland will not be adversely impacted.

The site will have an adverse impact on an area of rare Acid Grassland, known as The Roughetts. The retention, maintenance and restoration of this habitat is of great importance for the diversity of Kent's natural habitats.

The site falls within the Greensand Heaths and Commons Biodiversity Opportunity Area, which is of regional importance as a wildlife corridor.

RSPB - Share the views of Kent Wildlife Trust.

British Horse Society – Roughetts Road is used to access the limited rights of way network by many equestrians, the introduction of additional HGV's will increase the risk to riders using the road.

Request that diverted footpaths be upgraded to bridleways and an off-road bridleway to the west of Roughetts Road is provided to allow riders to keep off road as much as possible. Also request that the restoration makes use of the opportunity to provide new rights of way, road side margins and/or enhancement of the existing routes.

KCC Advisors

In undertaking this detailed assessment, advice has been sought from a range of technical specialists who advise the County Council on planning matters. This includes advice from on biodiversity, Public Rights of Way, noise, air quality, landscape, heritage, water resources, stability and highway and transportation interests. The views received have informed the assessment and the discussion section below. Several related standalone specialist reports have been prepared and have been published as background documents. The work has also been informed by the Project's Sustainability Appraisal work.

Views of Elected Representatives

KCC Member - Sarah Hohler

Ryarsh residents have been united in their opposition to the proposal to include this site in the Kent Waste and Minerals Local Plan and have been supported by neighbouring villages. The number of objections has been huge, as has attendance at local meetings.

As local member I have tried to make sure voices are heard, and listened to, and that information has been open and easy to access. I have not pre-judged the matter. The deeply heartfelt views of people are provided who are seriously concerned about the impact this site would have not only on their lives but on those of future generations. These views are backed up by careful and detailed research.

Tom Tugendhat, MP

The cumulative impact of the site together with previous and current mineral working would, in the view of residents, be severe.

As it is such a large site, the site would have a visual impact on the landscape and would affect views of local communities, including businesses and visitors. The site is within the setting of the Kent Downs AONB. The site is also located in the Green Belt and this should also be taken into account.

Vehicles should be prevented from travelling north from the site to roads in and around Ryarsh, Addington and Birling. In any event there is a risk that such routes could be used by accident including by speeding vehicles. There will be impacts on Roughetts Road due to an increasing number of vehicles. The impact on the A20 should also be considered in detail including the safety of the junction with Roughetts Road. Impacts on pedestrians should also be considered including the fact that well used PROW crosses the site.

Air quality will be impacted due to silica sand dust which is known to be severely harmful to health and this needs to be considered further. Other impacts on air quality arise due to excess Nitrogen Dioxide levels caused by HGVs. Effects on air quality due to silica dust will impact wildlife and ancient and BAP deciduous woodland and the views of Kent Wildlife Trust should be sought. Details should be sought concerning trees on the site and the existence of any Tree Preservation Orders. The site is within 1.8km of a SSSI and impacts on this should also be considered.

There are historic and listed buildings in the area, including the grade II listed Duke of Wellington pub, and impacts on these need to be considered.

If approved there should be stringent tests on restoration to ensure no impacts on, and enhancement of, biodiversity. The impact of loss of Grade 3 agricultural should also be considered.

The need for the mineral should be based on the latest guidelines. In accordance with government guidance areas with a smaller supply should meet their own needs and not rely on larger mineral planning authorities such as Kent to meet their needs.

Views of local residents

Many of the local residents objecting to the proposed site have been as part of the Ryarsh Protection Group, an action group working alongside Ryarsh Parish Council to object to the allocation of the site. In addition to individual letters, it submitted a report entitled Why Ryarsh is an Inappropriate Location for the Proposed M8 Quarry Development, November 2018. This set out 32 grounds to support its view. A copy is appended at appendix 3. The views are supported by the local MP Tom Tugendhat.

Concerns raised by local residents during the options consultation included:

- Adverse impact on the local amenity by way of noise, dust and vibrations
- Strain on the local highway network which are inadequate for HGV traffic
- Destruction of the landscape and adverse impact upon the AONB
- Adverse impact on local water resources
- Adverse impact on flora and fauna including impact upon ancient woodland
- Adverse impact on quality of life
- General blight and pollution to the local environment
- Adverse impact on PROWs
- Visual impact
- Health risks from slow moving vehicles and risk of silicosis and other pulmonary diseases from the quarrying of silica sand that will cause respiratory silica to be breathable in the locality
- Adverse impacts from cumulative quarrying activity and the M20 motorway
- Adverse impact on Ancient Saxon village and historically significant buildings
- The promoter's noise and ecological survey work was flawed
- Potential operational; breaches and changes to planning schemes once permitted
- No benefits to the community
- Whether the need for the site (in terms of mineral supply) is justified

2.0 Sustainability Appraisal

In accordance with statutory requirements a sustainability appraisal (SA) has been completed which considers how well the site performs against certain sustainability objectives. The detailed results of the SA are set out in a separate document.

3.0 Discussion

This section addresses matters raised above as well as those identified during the initial site assessment which are key to assessing the suitability of the site for allocation in the Kent Minerals Sites Plan.

Amenity

The promoted site has been assessed against policy DM11 of the KMWLP which requires that mineral development should not generate unacceptable impacts from noise, dust, vibration, odour, emissions, illumination, visual intrusion, traffic or exposure to health risks and associated damage to

the qualities of life and wellbeing to communities and the environment. Similar policy protection is provided within the NPPF.

Impact on amenity may arise as a result of dust, noise, illumination and vibrations resulting from operations at the site and from vehicle movements. The amenity impact could also have a visual dimension resulting from an activity which is industrial in nature being located within a semi-rural setting. Sensitive receptors include the communities (including visitors and businesses) proximate to the site itself and roads used to access the site may also be affected by impacts associated with the quarry traffic. There are a number of residential properties within 50m of the site.

With respect to air quality, the site is located between the M20, Roughetts Road and London Road which are the main sources of air pollution in the area. The Council's advisor on air quality, recognises that air quality is generally good, although notes that there is potential for health and amenity impacts at residential receptors in Roughetts Road to the east and London Road to the west. The golf course and the church (to the east and west, respectively) also represent sensitive receptors. It considers that appropriate mitigation of vehicle emissions is achievable, dependent on the nature of site activities.

Due to the presence of silica sand within the site, there is a risk that Respirable Crystalline Silica will arise from operations at the site. Advice from Public Health England (PHE) suggests that the risks associated with silica dust should be treated in the same way as the risks associated with any dust associated with quarrying or industrial activity and that this is primarily an occupational risk, as described in the Health and Safety Executive's "Control of exposure to silica dust: A guide for employees" advice note. The risk of non-occupational exposure to quartz (silica dust) arising from site operations is extremely low, and it is more likely to occur through the interaction with household items, such as paints and cosmetics.

The noise climate is likely to be influenced by road traffic noise from the M20 to the north and the A20 to the south. There are a number of individual dwellings within 50 metres of the site and mitigating the adverse impact for these dwellings is likely to require a combination of screening and an increased standoff. The residential development to the south and west of the site is in excess of 200m from the site and an acceptable level of noise environment is expected to be achievable.

At all quarries, steps are taken to minimise noise, for example by ensuring vehicles are fitted with silencers and acoustic barriers are constructed as required. Dust suppression measures are also employed to prevent dust dispersion. Due to the distance of the site from the village centre (including the school), noise and dust is not expected to have a noticeable impact on the village. Noise and dust issues would be considered in detail at the planning application stage, if detailed proposals were submitted.

The Council's assessment of the potential impacts on amenity concludes that whilst it may be challenging to mitigate all amenity impacts, particularly for those who live closest to the site, it would be unlikely that any amenity impact would be so severe that the site should not be developed. Mitigation of amenity impacts would be required, and this would likely include screening bunds and increased stand-off at some points, such as those closest to the properties along Roughetts Road. It is therefore considered that any amenity impacts associated with the operations of the site can be satisfactorily mitigated in a manner similar to other quarrying operations in the vicinity of residential development and it is concluded that potential amenity impacts are not sufficiently significant to

warrant non-allocation of the site.

Note that consideration of impacts on visual amenity are considered below.

Highways and Transportation

The proposed site has been assessed against policy DM13 of the KMWLP which requires that minerals development satisfy that the access arrangements are not detrimental to road safety, that the highway network is able to accommodate the traffic flows and will not give rise to unacceptable impact on the environment or local community and that emission control and reduction measures are proposed, particularly within an AQMA. Similar policy support is provided for within the NPPF.

The promotor submitted a highways and transport assessment which considered whether Roughetts Road would have sufficient capacity as a road link. It was suggested that the Road has capacity for 1,020 two-way vehicles per hour, and it is currently operating at well below this (210 vehicles). Furthermore, London Road (which will connect the site to the SRN) is also operating at well below its threshold. It was therefore concluded that both roads have sufficient capacity to accommodate the forecasted increase in vehicle movements. This methodology factored in the anticipated background growth rates to 2030.

The concern that the junction of Roughetts Road and the London Road does not have capacity to accommodate regular HGV movements is also addressed which concludes that the junction is currently operating below the recognised threshold at both AM and PM hours and so the junction could accommodate quarry traffic.

Whilst recognising that Roughetts Road has previously been used by HGVs to access the former Ryarsh Brickworks site (now a housing development), the Local Highway Authority has concerns that the highways and transport assessment is deficient in a number of minor aspects. Ultimately however, it considers that it is possible to operate the site in a manner that should not result in unacceptable impacts on the road network. This is subject to any application fully addressing the following matters:

- The need for any localised road widening on Roughetts Road to accommodate turning movements to and from the site access.
- The need for regular road condition surveys to be carried out during the operation period with maintenance provided where required.

If an acceptable proposal were to come forward for development in this location an appropriate condition(s) would be imposed relating to HGV or other vehicle routing and this would include a prohibition of HGVs (or other vehicles if deemed necessary) from turning left out of the site entrance (i.e. to the north) or right into the site entrance (from the north). In this way all HGVs (or other vehicles if deemed necessary) would be required to travel to and from the A20 via that section of Roughetts Road to the south of the proposed site entrance. If HGVs travel the wrong way and enter or leave the site from / to the north, the operator could be served with a breach of condition notice. Such a requirement would avoid vehicles using unsuitable country roads to access the site from the north.

Landscape and Visual Amenity

The proposed site has been assessed against policy DM2 of the KMWLP which aims to ensure that there are no unacceptable adverse impacts on important landscapes, including the Kent Downs AONB, and sets out the circumstances where impacts upon them would be acceptable. Policy DM2 notes that proposals outside, but within the setting of an AONB will be considered having regard to the effect on the purpose of conserving and enhancing the natural beauty of the AONB. This policy was prepared in line with the NPPF which sets out similar criteria. Impacts on visual amenity are assessed against policy DM11 that seeks to ensure that mineral development does not generate unacceptable adverse impacts from visual intrusion.

The site is directly to the south of the Kent Downs AONB, and although the M20 provides a barrier, it is within its setting. The proposed site is slightly elevated and located in open countryside.

Likely sources of landscape and visual effects associated with development include:

- Removal of vegetation cover, and soil stripping, as part of Site clearance activities;
- temporary diversion of footpaths that run through the Site;
- the presence of the Site compound, Site plant (including vehicles), and materials stockpiles;
- the presence of areas of excavation in the landscape;
- movement of HGVs accessing the Site; and
- the presence of infilling operations following the completion of excavation in each phase.

Three-metre-high screening bunds, together with tree planting, are proposed to mitigate the visual impact of the development for the lifetime of the activities.

A landscape assessment was submitted by the promotor, which concludes that the surrounding vegetation affords the site a fairly enclosed nature which limits views into the site. The assessment considers that the only noticeable visual impacts would occur in views from relatively close proximity to the site such as those from Roughetts Road, London Road, certain PROW and nearby residential properties and that mitigation in the form screening via bunding and planting would be inherent in the design. The nature of the development means it would progress gradually below ground level which would further reduce the visibility of extraction activities. The report concludes that the proposed development would have a highly localised impact on the landscape character, with the proposed mitigation considerably reducing any visual impact.

Kent Downs AONB Unit confirmed that it was broadly in agreement with the findings of the promoter's report that views of the proposed site from the AONB would be limited and concluded that, subject to a requirement for appropriate mitigation, it would not object.

A critique of the landscape assessment carried out on behalf of Kent County Council identified deficiencies in the promoter's assessment including:

- A lack of information provided about the phasing of extraction, restoration and mitigation measures.
- A lack of consideration of likely effects upon the Kent Downs AONB, on nearby properties and users of the public rights of way that run through the site.

Notwithstanding the above, the critique concluded that a number of measures could be employed to provide mitigation to reduce or eliminate adverse impacts. In particular screening should be provided

during the proposed extraction period particularly adjacent to the boundary viewed from Roughetts Road. Proposed restoration landscaping should, when available, take into account the loss of internal hedge material and enhance the existing woodland at the southern boundary to the site enhancing the identified ancient woodland and BAP deciduous woodland. It would also be preferable that planting and hedging is provided to compliment any proposed reinstated or public pathway realignment within the proposed development site.

The efficacy of such mitigation measures would need to be clearly demonstrated as part of any detailed planning submission.

Whilst it is anticipated that significant adverse visual effects could occur locally, in the wider context it is considered that effects would be limited by the level of enclosure provided by the pattern of vegetation cover.

Overall effects on the nearby Kent Downs AONB are also considered unlikely to materially affect the designation, but this needs to be confirmed by careful assessment.

In light of the above, the County Council considers that subject to certain matters being satisfactorily addressed at the planning application stage, the site is acceptable in principle on landscape grounds.

Biodiversity

The proposed site has been assessed against policy DM3 of the KMWLP which requires that proposals do not result in unacceptable adverse impacts on Kent's important biodiversity assets and SSSIs. This policy was prepared in line with the NPPF which sets out similar criteria.

Natural England advise that the site is within the Impact Risk Zone of the Trottiscliffe Meadows SSSI nearly 2 km away. It is considered that adequate mitigation could be put in place to ensure that development has no impact on the SSSI.

Disruption to the Ancient Woodland (directly or indirectly) to the south of the site should be avoided and an appropriate buffer zone between the Ancient Woodland and the workings would be required, the extent of which would be confirmed at the planning application stage.

Trees in the south western corner of the site are identified as part of a Group Tree Preservation Order (TPO – reference 05/00016/TPO). As above, disruption to the TPO should be avoided and an appropriate buffer zone would need to be provided between the protected trees and the excavation area. Impacts on affected trees would be considered in accordance with Policy DM2 of the KMWLP at any planning application stage.

Whilst Kent Wildlife Trust have concerns regarding an area of Acid Grassland on the site, surveying has revealed that this has not been managed and so is of poor quality and cannot be deemed Priority Habitat Quality. The proposal to manage an area of acid grassland would likely result in an improvement to the current situation such that the botanical interest of the grassland is enhanced.

There are number of protected species on site, however it is likely that appropriate mitigation can be implemented and the ecological interest of the site for these species can be maintained.

The Habitats Regulation Assessment does not conclude that mineral working in this location would have any impacts on designated European sites.

Considering the above information, the County Council considers that any impact on biodiversity could be addressed and satisfactorily mitigated at planning application stage.

Historic Environment

The proposed site has been assessed against policy DM5 of the KMWLP which requires that there should be no unacceptable adverse impact on Kent's historic environment taking account of mitigation and compensation and heritage assets be conserved in a manner appropriate to their significance. This policy was prepared in line with the NPPF which sets out similar criteria.

There are a number of listed buildings within 500m of the site, three of which are within 260m of the site. In addition, there are a number of Scheduled Monuments within 1km of the site (Addington Long Barrow, within 960m and the Chestnuts Long Barrow within 1km), and Conservation Areas within 1km (Addington within 600m, Ryarsh Village within 640m and Offham Church within 800m). The County Archaeologist advises that there is potential for Paleolithic remains within the site and that investigative works and possible mitigation would need to be included within any planning application. It is considered that mitigation is possible to ensure local heritage assets, particularly the listed buildings within close proximity to the site, are protected from unacceptable impacts.

Historic England has been consulted on the proposal to allocate this site for mineral working and it has not raised any specific concerns.

Need for the Mineral

The proposed site has been assessed against policy CSM2 that sets out the requirements for the supply of soft sand and silica sand. This policy was prepared in line with the NPPF.

Calculations regarding supply and demand based on 2017 data, taken together with an 18-year landbank, suggest the shortfall is now in the order of 2.5mt for soft sand³.

The site is part of the Folkestone Formation (part of the Lower Greensand Group) and the economically important aggregate yielding geological unit, a loosely consolidated to unconsolidated marine (ancient beech) sand that is a unique part of the geological succession in Kent and the wider South East. The material is generally free of contaminants (in its purest form it is referred to as 'silica sand') and is of a particle shape and size consistency that makes it suitable as a mortar sand and its flow characteristics are such that it is often referred to a 'soft sand', it is also used as a constituent in coated stone production, or asphalts.

An alternative to the land-won soft sands, that will provide a steady and adequate supply as required by the National Planning Policy Framework, is unavailable at this time.

Neighbouring authorities support the allocation of sites suitable for the development of soft sand on the basis that this would help address a wider issue that the vast majority of soft sand in the unconstrained south east is being progressively exhausted, and much of what remains is constrained by designations such as AONB's or National Parks (such as the South Downs).

At this time, however there is no evidenced need to demonstrate a case to make significant over provision in Kent to meet a regional need.

³ See Soft Sand Topic Paper 2018

Green Belt

The proposed site has been assessed against policy DM4 of the KMWLP which states that development within the Green Belt will be considered in light of its potential impacts and shall comply with national policy and the NPPF policy on Green Belt.

The site is within the Metropolitan Green Belt. Mineral extraction is capable of being appropriate development within Green Belt, where it preserves openness and does not conflict with the purposes of including land within the Green Belt. Case law⁴ establishes that structures which are “generally encountered” in the context of the potentially appropriate type of development (in this case, ‘mineral extraction’) cannot, without anything more, cause a particular proposal to be inappropriate on the grounds of openness. The mineral extraction development at West Malling Sandpit is proposed to include access roads, movement of HGVs accessing the site, site offices and welfare facilities, mobile plant, screener, stockpiles and screening (bundling and tree planting) all of which can be said to be generally encountered at mineral extraction sites and so are also not automatically considered to be inappropriate development.

The Green Belt assessment is set out in Appendix 2. It concludes that mineral excavation and the restoration of the mineral working by infilling to existing ground levels would constitute inappropriate development within the Green Belt. It is considered that very special circumstances exist to override the presumption against the restoration of the mineral working by infilling. However, in the case of the mineral extraction activity, by virtue of the fact that the need for the development (supply of soft sand) could be met at an alternative suitable site outside of the Green Belt, it is considered that very special circumstances to override the presumption against inappropriate development in the Green Belt do not exist. Allocation of this site in this location would therefore be inconsistent with local and national Green Belt policy.

Water Environment

The proposed site has been assessed against policy DM10 of the KMWLP which requires that development should result in no deterioration and improved ecological status of all waterbodies within the site and/or hydrologically connected to the site. This policy was prepared in line with the NPPF.

The site is entirely located within Flood Zone 1 (less than 0.1% annual probability of flooding) and the Environment Agency has not indicated any concerns. The County Council’s Flood Risk Assessment (FRA)⁵ recognises that there is an unnamed watercourse to the south of the site, however any potential flooding from this watercourse is likely to be directed to the lower-lying land to the south of the site. The FRA recommends that a 16-metre standoff be provided between any mineral working and this watercourse.

With regard to impacts on water quality, the Environment Agency considers that mitigation of potential impacts on groundwater and the Leybourne Stream caused by mineral working in this location is possible.

In light of the above it is concluded that the site’s impact on the water environment does not render it unsuitable for allocation.

⁴ Europa Oil and Gas Ltd v SSCLG [2013] EWHC 2643 (Admin) at [64]

⁵ Site M8: West Malling Sandpit Flood Risk Assessment, Waterco, July 2018

Land Stability

The proposed site has been assessed against policy DM18 of the KMWLP which expects that planning permission for development will not be granted unless it is demonstrated that development will not result in land instability. This policy was prepared in line with the NPPF.

The Council's land stability report⁶ includes consideration of the site's proximity to the M20, highlighted by Highways England, and concludes that there are no issues which cannot be mitigated by standard quarry design practices.

Soil Quality

The proposed site has been assessed against policy DM1 of the KMWLP which requires that proposals demonstrate that there is no unacceptable adverse impact on the use of other land for other purposes. This policy was prepared in line with the NPPF.

Natural England's Agricultural Land Classification Map states that the site contains Grade 3 (Good to Moderate) soil. It is considered that while mineral extraction would result in a loss of this soil such a loss would be temporary as the site would be restored to agricultural land.

PROW

The proposed site has been assessed against policy DM14 of the KMWLP which requires that where proposals impact a PROW, they will only be permitted if; satisfactory prior provisions for diversion of the PROW can be made which are convenient and safe for the PROWs users, an acceptable alternative route can be provided during operations and restoration, and opportunities to improve countryside access are taken wherever possible. This policy was prepared in line with the NPPF which sets out similar criteria.

It is considered that although PROWs (MR153 and MR152) cross the site, these would ultimately be reinstated following restoration and temporary impacts can be adequately mitigated by diversions that would allow continued connectivity between surrounding villages. The County Council's PROW Officer raises objection to the proposal subject to details of diversion being provided.

Cumulative Impact

The proposed site has been assessed against policy DM12 of the KMWLP which expects that mineral development should not result in an unacceptable adverse, cumulative impact on the environment or communities. This policy was prepared in line with the NPPF which sets out similar criteria.

It is recognised that mineral working has taken place in the surrounding area in the past. The KMWLP notes that cumulative impacts may occur where separate developments occur near to each other and there is a need for such impacts to be taken into account. The assessment of potential impacts which could arise from development in this location has not revealed that unacceptable cumulative impacts would arise, however cumulative impacts will require further consideration if a proposal were to come forward.

4.0 Conclusion - M8 West Malling Sandpit, Ryarsh

Whilst the site is generally considered acceptable in principle, there is strong policy opposition to any inappropriate development within the Green Belt, unless very special circumstances can be shown to

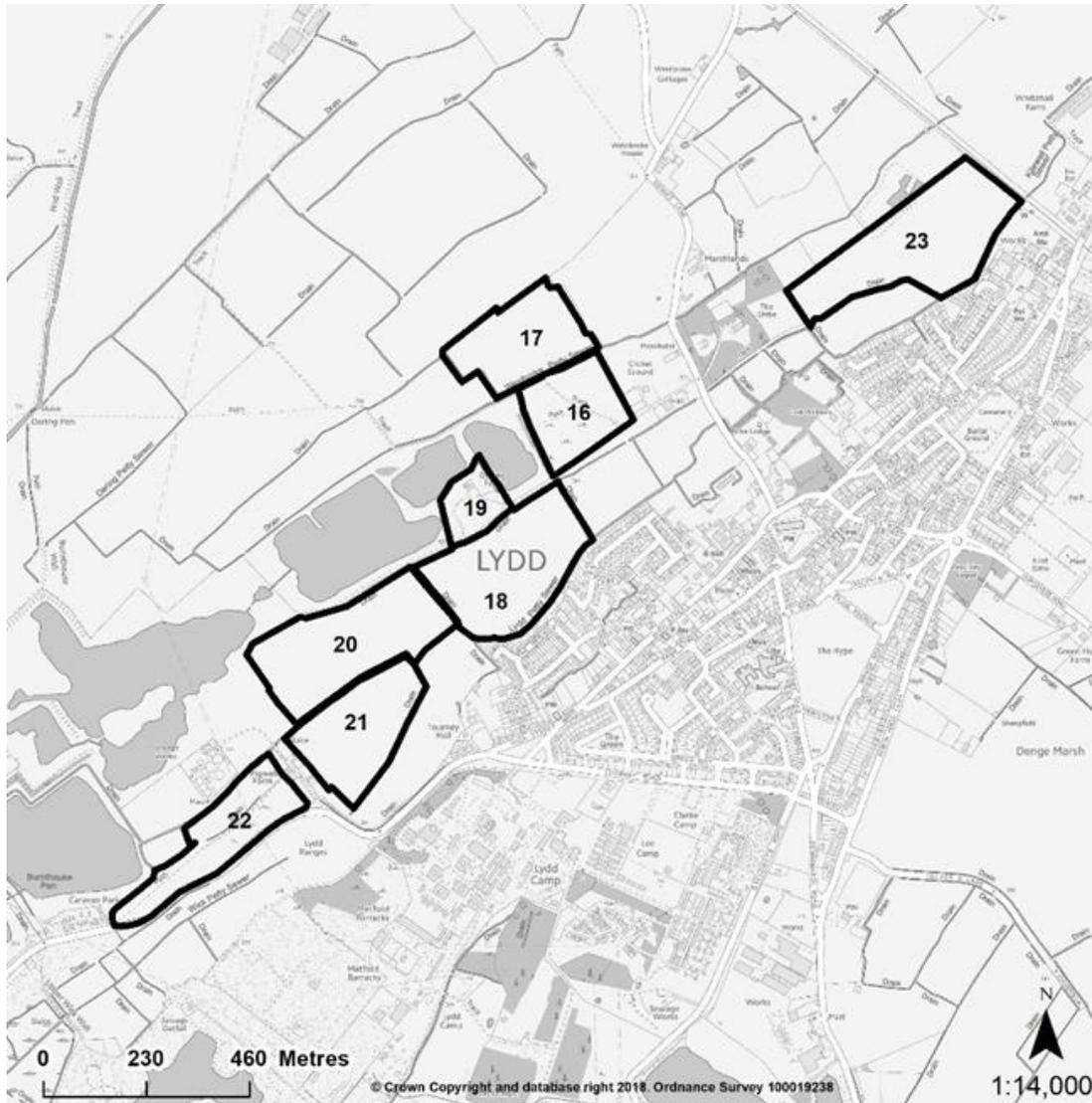
⁶ KCC (amey) Land Stability Assessment Technical Report August 2018

exist. The County Council considers that, activities associated with the mineral extraction would not preserve the openness of the Green Belt and so the development is inappropriate, and at this time, very special circumstances do not exist, primarily as the quantity of soft sand needed over the Plan period can be met by another site that has been assessed as suitable for development which is not located with the Green Belt.

In light of this assessment it is concluded that the M8 West Malling, Ryarsh site should not be allocated. The site is not identified as a site in the Pre-Submission draft of the Mineral Sites Plan.

M2: Lydd Quarry/Allen's Bank Extension, Lydd - Sharp Sand and Gravel Sites

Site Location Plan



1.0 Matters addressed by Detailed Technical Assessment

Initial Assessment

As set out in section 3, of this report the initial assessment of the site⁷ identified a number of matters requiring further consideration, these were:

- Impact on landscape
- Impact on biodiversity
- Impact on the historic environment
- Impact on Public Rights of Way (PROW)
- Impact on the highway network
- Impact on services and utilities
- Impact on local amenity
- Cumulative impact with historic quarrying operations in the area
- Impact on an Airport Safeguarding Zone (Lydd Airport)

Matters Raised During the Options Consultation

Views of Key Organisations

Environment Agency (EA) – Object in the absence of information to demonstrate that the site will not have an adverse impact on water ecology.

Site is located within Flood Zone 3 which has the highest probability of flooding and the area currently benefits from flood defences. No objection provided there is no loss of floodplain capacity or alteration of potential flood-flows during or after the mineral extraction.

The area is known to have a high groundwater level; however, it is considered that the extraction of the mineral, and the subsequent creation of several flooded pits, will have no substantial consequences for groundwater flooding and are unlikely to result in an enhanced risk of flooding.

Providing that the functionality of the ditches and sewers local to the promoted site are not compromised there is likely to be little deterioration from the current level of risk, with respect to susceptibility to both groundwater and fluvial flooding events.

Natural England – Appendix 4 sets out the advice received from Natural England in full but this is summarised as follows:

Extraction of minerals will result in the direct loss of the geomorphological interest from this area of the Dungeness, Romney Marsh and Rye Bay Site of Special Scientific Interest (SSSI). Ditch and other wetland habitats from within the SSSI, Special Protection Area (SPA) and Ramsar Site are also likely to be directly impacted as a result of this proposed minerals allocation.

In addition to these direct impacts, based upon the best currently available information, there are

⁷ See Mineral Site Selection – Initial Assessment - Stages 1 and 2 of the Site Identification and Selection Methodology, November 2017

potential indirect impacts to the wetland habitats surrounding the proposed allocation site from changes to the hydrology (including saline incursion), water quality and availability together with loss of supporting land for species associated with the SPA and Ramsar Site and the issue of disturbance are also likely to result from the proposal.

Full and independent consideration is required of whether there are alternative sites or sources of material which will avoid or result in lesser environmental effects.

The proposed allocation of Lydd Quarry would appear to be contrary to the National Planning Policy Framework (NPPF) since the Council's own documents confirm there are alternative sources to meet the demand. The allocation would also appear contrary to Policy CSM1 of the adopted Minerals and Waste Plan since Paragraph 177 of the NPPF confirms that 'the presumption in favour of sustainable development does not apply where development requiring appropriate assessment because of its potential impact on a habitats site is being planned or determined.' Policy CSM2 of the adopted plan also confirms that alternative sources will be able to meet the demand by stating that if additional sites are not brought forward 'Demand will instead be met from other sources, principally a combination of recycled and secondary aggregates, landings of Marine Dredged Aggregate (MDA), blended materials and imports of crushed rock through wharves and railheads. The actual proportions will be decided by the market'.

Southern Water – Notes the following about the site:

- Sewerage infrastructure crosses several of the proposed sites.
- Lydd wastewater treatment works (WWTW) is adjacent to site 22.
- The access road for the WWTW runs between sites 21 and 22.

Does not consider any of the above to be a fundamental constraint, provided that appropriate provisions are made in the wording of any policy allocating these sites for minerals development.

The sewerage infrastructure connects the Lydd catchment to the WWTW and requires protection. Diversion may be possible at the operator's expense, provided a feasible route is available. Further engagement should be sought with Southern Water as the development proposal progresses.

Operational equipment at Lydd WWTW is in continual active use, therefore it is essential to maintain unhindered access to the WWTW via its access road at all times.

Folkestone and Hythe District Council - Object for a number of reasons:

- Several of the areas border housing in Lydd, the boundary follows residential back gardens, there may be an impact on public health and amenity.
- It is unclear how the Allens Bank parcel will be linked to the rest of the site. The railway should be utilised to prevent more HGV movements in the town of Lydd.
- Close proximity to the Dungeness Ramsar site, SPA and Special Area of Conservation (SAC), the proposed extension areas will require a Habitats Regulation Assessment. The site is within an SSSI.
- the site is within an area of archaeological potential and the Historic Environment Record show that there are a number of historic features within the site and a number of listed buildings within 250m.
- Potential for increased risk of bird strike due to open water bodies, could have impacts for the airport.

Lydd Town Council – Object for a number of reasons:

- Adverse impact (noise, dust and vibration effects) on quality of life and wellbeing to the residents of Lydd.
- Creation of further open water bodies and de-watering of aggregate extraction cells will exacerbate saline incursion to groundwaters due to increased evaporative losses and a hydraulic gradient being established with the nearby coastal waters.
- Impact on highways is unacceptable given that the local road network was not designed for the intensity of HGV use that is being proposed, the road infrastructure is being adversely affected at this time.
- No direct link between the economy of Lydd and the extraction of aggregates, no evidence of enhanced economic or employment benefit to Lydd.
- Alternatives to land-won materials around Lydd should be sourced.

East Sussex County Council- Sharp sand and gravel – The Council states that reserves for sharp sand and gravel are depleting at Lydd Quarry, this being one of the topics the Council are considering in the Review of the East Sussex Waste and Minerals Local Plan (WMLP). The Council point out that the operator of Lydd Quarry submitted a proposed extension to the quarry on the East Sussex side during the Call for Sites and Evidence consultation in 2017. The Council is currently considering this site and will determine whether it should be included in our Draft Revised Policies consultation later in 2018.

With regard to the Kent area Option site (Lydd Quarry and Allens Bank) the Council support the extra provision put forward in the Kent sites to serve the East Sussex market, subject to the following clarifications:

- prior to any decision being taken to allocate the proposed site, the Council would wish to understand whether overall production would exceed current levels. Were this to be the case and given that 50% of the quarry output currently serves the East Sussex market, consideration will need to be given to the impact of an increase in HGV movements, as well as any necessary and appropriate mitigation measures.
- The direction of working and phasing of the quarry extraction would need to be clarified. In the event that the quarry was to be extended both in Kent and East Sussex, would both sides of the quarry be worked at the same time? Or would production at the quarry concentrate in either Kent or East Sussex?
- If further reserves of this valuable material were to be allocated, its use should be limited to a constructional aggregate, and not for lower specification use such as beach replenishment.

Romney Marsh Internal Drainage Board (IDB) - The site is promoted as having a ‘dry cell’ extraction system in that water is pumped from an active pit, this presents two potential issues;

- a net loss of water for at least half of the year, and;
- salinity issues.

Currently water of varying salinity is discharged from the site into the Jurys Gut Sewer (Main River) from where it flows to the sea. Disposal of potentially saline water from the M2 sites as discharge into the nearest watercourse is not good practice.

Any loss of access to IDB interests and loss of habitat through development / erosion etc can be addressed and mitigation considered during the Board's Consenting procedure and is not a plan allocation matter. IDB Consent will be required for some aspects of the promoted work. Infilling and diversion of watercourses, whilst not an activity encouraged, is not insurmountable.

Offsetting the evaporation losses from the resultant lakes is a matter the EA should address once the losses have been quantified. The EA are the only organisation that could theoretically replenish losses from the District using the marsh feed.

British Horse Society – The area has a large equestrian population and increased heavy goods traffic and large plant working will cause an additional hazard for equestrians.

For this reason, we would ask that horse margins at the side of the roads be provided and/or the paths currently provided for walkers and cyclists be upgraded to also allow equestrians to use them. Connections to all PROWs must be maintained.

CPRE – Object to the allocation of this site for several reasons:

- The sites are designated as SSSI and as Areas of Archaeological Potential. They are adjacent to the Dungeness, Romney Marsh and Rye Bay Ramsar and are near to a Special Areas Conservation.
- Extraction from land east of PROW HL26 would adversely affect the setting of Listed Building Tournay Hall, as well as Lydd and All Saint's Church, Lydd and views of them from the PROW.
- It is also understood that the existing lakes and pools resulting from previous mineral extraction operations are becoming saline. This could have an adverse effect on nature conservation.
- Traffic impact on residential roads by HGVs coupled with HGV traffic moving shingle across the point. In accordance with previous practice it would be appropriate to compensate the local community for the inconvenience and disturbance.

Consideration should be given to dredging from Dungeness Point to provide material of the same quality before allocating the sites.

East Kent Badger Group – There are active badger setts on this land.

Kent Wildlife Trust - Object until it can be shown that there will be no negative impact upon Local Wildlife Site SH35 "Lydd Common and Pastures" with which the site overlaps. This is a designated site of County importance for nature conservation and therefore this needs to be taken into account.

In addition, there needs to be given consideration of the possible impact upon the National designation of Dungeness, Romney Marsh and Rye Bay SSSI; and European designated sites (Dungeness to Pett Level SPA, Dungeness SAC) in this area and the HRA process.

RSPB - Site would result in direct loss of local wildlife sites and therefore object to the proposal.

National Air Traffic Service (NATS) – No objection to the proposal

KCC Advisors

In undertaking this detailed assessment, advice has been sought from a range of technical specialists who advise the County Council on planning matters. This includes advice on biodiversity, Public Rights of Way, noise, air quality, landscape, heritage, water resources and drainage (flood risk), stability and highway and transportation interests. The views received has informed the assessment and the discussion section below. Several related standalone specialist reports have been prepared and have been published as background documents. The work has also been informed by the Project's Sustainability Appraisal work.

Views of Elected Representatives

Damian Collins MP (comments summarised)-The extraction of 3.1 million tonnes of sand and gravel at Option site M2 Lydd Quarry and Allens Bank extensions as being considered by Kent County Council would result in 12.4 years of operations with restoration to open water bodies would have boundaries that are very close to homes.

The residents of and around Lydd have experienced mineral extraction operations for many years and have become a fact of life locally. The process creates jobs and provides materials for flood defence along the Romney Marsh coastline and is vital in supporting the building of new homes. However, gravel extraction creates problems for the community, particularly from the noise of the quarrying and the transportation of the aggregate materials on local roads that are not suitably designed for that use. There is great disturbance for residents who live close to the sites. Therefore, the sensitive selection of the sites for large scale extraction is so important.

Alternative supply should be sought, particularly where coastal defence works are concerned. Thousands of tonnes of shingle are placed along the coast from Rye to Dungeness every year as part of sea defence works and much is washed out into the Channel. Also, much of this shingle gathers on the eastern side of Dungeness. There is no reason why this resource cannot be recycled using dredging vessel based at the port of Rye to recover this material. This would be a far preferable process, without incurring the same disturbance that would be caused by open quarrying sites close to Lydd. It would also be a sustainable way of mineral aggregate supply compared to land-won quarrying.

Tony Hills (KCC Member) – Whilst recognising the pressure that the County is under to supply aggregates for housing building, land won minerals are a finite resource and alternative sources should be considered such as marine dredging. This includes the working of shingle below the high tide mark from where substantial amounts of material can be obtained. Using dredgers is a far faster method of acquiring shingle, causes less costly damage to our highways infrastructure, protecting our communities from untold blight.

Views of Local Residents

Many of the local residents who objected to the proposal did so as part of the Lydd Resident Group; a local action group working alongside Lydd Town Council. In addition to the individual letters received from residents, the Group coordinated a petition objecting to the site on grounds of flood risk, contamination of water sources, increase in traffic and devaluing of local properties. This petition attracted 747 written signatories and 229 e-petition signatories.

Outside of the petition, concerns raised by local residents during the options consultation included:

Concerns raised by local residents during the options consultation included:

- Adverse impact on the local amenity by way of noise, dust and vibrations
- Increased probability of harm through drowning events in created open water bodies
- Adverse impact on property values
- Adverse effect on ability to insure properties appropriately
- Strain on the local highway network that is in poor condition due to current operations using roads not designed for that intensity of HGV use
- Adverse impact on highway safety
- Disruption of the landscape with increased artificial water bodies
- Adverse impact on local water resources
- Adverse impact on flood risk to the area, removal of minerals will reduce groundwater retention and exacerbate flood events
- Increased open water bodies would lead to increased evaporative losses and thus increased saline incursion to groundwater resources
- Alternatives to land-won aggregates exist in the marine area, in particular the accreted materials on the east side of Dungeness, further land-won quarrying that is used for beach replenishment should cease and recycling of this material should be employed
- Climate change effects causing sea level rise could lead to inundation of the quarried areas and causing Lydd town to be surrounded with standing water
- Adverse impact on flora and fauna
- Adverse impact on quality of life and general environmental blight

2.0 Sustainability Appraisal

In accordance with statutory requirements a sustainability appraisal (SA) has been completed which considers how well the site performs against certain sustainability objectives. The detailed results of the SA are set out in a separate document. The site has also been considered against the requirements of the Conservation of Habitats and Species Regulations 2017 (the Habitat Regulations).

3.0 Discussion

This section addresses matters raised above as well as those identified during the initial site assessment which are key to assessing the suitability of the site for allocation in the Kent Minerals Sites Plan.

Amenity

The promoted site has been assessed against policy DM11 of the KMWLP which requires that mineral development should not generate unacceptable impacts from noise, dust, vibration, odour, emissions, illumination, visual intrusion, traffic or exposure to health risks and associated damage to the qualities of life and wellbeing to communities and the environment. Similar policy protection is provided within the NPPF.

There are a number of parcels or cells that form the site where mineral extraction would take place. Some are a considerable distance away from the area of Lydd Town, others are closer, with particular emphasis in this regard is parcel 18 that is very proximate to a residential quarter of Lydd. Given the low ambient noise levels in this open rural landscape there may be impacts on these

properties that would require noise mitigation. The precise form of this is not determined, though the lack of substantive top and sub-soils would preclude extensive sound barrier bunding. Increased stand-offs to reduce noise impacts to the affected residential areas of Lydd would probably be the more effective available mitigation for noise impacts.

It is considered that mitigation would be required, as outlined above, to reduce noise impacts on the residential areas of Lydd that be adversely affected.

With regard to concerns for dust impacts these relate to those that could arise from the quarrying operations and the processing and dispatch of the product. The area is extensive and significant distances would exist for most of the promoted extraction areas, the extraction method proposed is to reduce the water table in the extraction parcel and 'dry cell' with active pumping. As opposed to 'wet extraction' in an open water body. Though 'dry cell' extraction is proposed the material will be semi-wet and thus still in a cohesive state where fines within the sand and gravel would be held together by the moisture and give rise to limited airborne dust impacts. Though, water table fluctuations could change this relationship the low-lying nature of the area would not give rise to very wide fluctuations. It is considered that if not adequately mitigated by quarry maintenance, dust impacts could occur due to dust being 'tracked out' by HGV movements.

Highways and Transportation

The proposed site has been assessed against policy DM13 of the KMWLP which requires that minerals development satisfy that the access arrangements are not detrimental to road safety, that the highway network is able to accommodate the traffic flows and will not give rise to unacceptable impact on the environment or local community and that emission control and reduction measures are proposed, particularly within an AQMA. Similar policy support is provided for within the NPPF.

The current planning permission for the existing Lydd works states that there should be no more than 250 HGV movements a day. The County Council as Local Highway Authority are of the view that continuation of this level of intensity over the period of the additional mineral extraction would not warrant an objection to the promoted site, given that it will generate no extra vehicle movements than the permitted quarry development.

This position is caveated by the County Highways Authority being satisfied that the existing minerals working (related to the 2007 planning application) would be fully extracted first and the two implemented planning permissions would not operate at the same time. Moreover, any new planning permission for the proposed extension areas would require a condition to limit the site to 250 HGV movements a day (125 in / 125 out) in order to maintain the same level of intensity. Road maintenance is a matter that the County Council has to respond to in its role as the County Highways Authority when it is determined that road surfaces and or design requires maintenance or change.

PROW

The proposed site has been assessed against policy DM14 of the KMWLP which requires that where proposals impact a PROW, they will only be permitted if; satisfactory prior provisions for diversion of the PROW can be made which are convenient and safe for the PROWs users, an acceptable alternative route can be provided during operations and restoration, and opportunities to improve countryside access are taken wherever possible. This policy was prepared in line with the NPPF which sets out similar criteria.

The promoted site would have a limited impact on the PROW network of the area. Also it is considered that any management requirements to maintain public accessibility and safety can be reasonably addressed at the planning application stage. There are no grounds not to allocate the site on the basis of likely unacceptable adverse impacts occurring on any defined PROW.

Landscape, Visual Amenity and Green Infrastructure

The proposed site has been assessed against policy DM11 of the KMWLP which requires that proposals for minerals development do not cause unacceptable adverse impact in terms of visual intrusion. This policy was prepared in line with the NPPF which sets out similar criteria.

Policy CSD4 of the Folkestone and Hythe core strategy 2013 designates the town of Lydd as Green Infrastructure (GI), the purpose of which is to promote opportunities for net gains in biodiversity, and positive management of areas of high landscape quality or high coastal/recreational potential. The proposal has therefore also been assessed in terms of its potential conflict with this policy.

The existing landscape is characterised as flat in nature with extensive open views without significant disruption, though there are man-made structures such as pylons and existing or previous mineral extraction sites. The proposed extension areas are within the existing SSSI with a number of other designated landscapes and habitats in close proximity. The extension sites would be located in closer proximity to the town of Lydd. There are no detailed restoration proposals but the promoter has indicated that following their extraction, the areas would form open water bodies.

Landscape assessment indicates the need for significant screen planting and bunding along boundaries close to residential properties. With variation of the width of screen planting and its location within the boundary area to preventing large linear lengths of planting. Also, a reflection of the 'pocket' woodlands evident locally could be replicated, where possible, and therefore screening should not be uniform in nature and careful consideration should be given to canopy and understory planting mixes that are native to the local area.

However, limited top soil and overburden over much of the site may militate against any extensive screen bunding opportunities. Screen planting may be possible, though variations of salinity of the water table may reduce the opportunity for substantive tree growth in many parts of the shingle ridge and surrounding area. Stand-offs and some planting where possible appear to be the only suitable 'screening' options available. Provided the stand-offs are of a sufficient distance then the operations may be reduced in the expansive landscape such that the impact on the residential receptors could be minimised to an acceptable degree overall.

This is more a matter for detailed consideration for a planning application, though wet land and marginal habitats restoration with native local species, marginal and aquatic vegetation, wetland scrub characteristic of the local area and associated grass and wildflower mixes would enhance biodiversity and could also have an ameliorating effect of integrating the lake margins (that are by their nature artificial) into the landscape.

Historic Environment

The proposed site has been assessed against policy DM5 of the KMWLP which requires that there should be no unacceptable adverse impact on Kent's historic environment taking account of mitigation and compensation and heritage assets be conserved in a manner appropriate to their significance. This policy was prepared in line with the NPPF which sets out similar criteria.

The available geophysical evidence suggests that Romano activity has occurred on the part of the site that includes parcel 23 (Allens Bank) and the possibility of important archaeology of this period is high. Due to the archaeological interest the area was removed from a planning application for mineral development in 1999 and also withdrawn from consideration during earlier work on the Mineral Sites Plan (the site was not included as part of the Preferred Options Regulation 18 Consultation in May 2012). Submitted information does not address the need for a full archaeological evaluation of this sensitive location and due to the likelihood of unacceptable impacts on the historic environment it is therefore not appropriate to allocate this site for mineral working as its deliverability is highly uncertain.

The archaeological potential of parcels 16,17,18, 19, 29, 21 and 22 of the promoted site is less pronounced. Archaeological evaluation can occur at the planning application stage and there are no overriding issues to not allocate these parcels on archaeological grounds.

The County Conservation Officer has raised concerns for impact on the character of the locality and how this would impinge on the Lydd Town Conservation Area. The creation of further open water bodies, an artificial feature, closer to the historic town Lydd Town will need to be screened, if possible, to ameliorate this impact satisfactorily.

Biodiversity

The proposed site has been assessed against policy DM3 of the KMWLP which requires that proposals do not result in unacceptable adverse impacts on Kent's important biodiversity assets and SSSIs. This policy was prepared in line with the NPPF which sets out similar criteria.

The promoted site is not within the adjacent Dungeness, Romney Marsh and Rye Bay SPA (save for parcel 19 that is coincident with the SPA/Ramsar area). Though is in close proximity and may have indirect impacts arising from any mineral extraction operations. Furthermore, many of the proposed allocations will affect a number of areas of Priority Habitat in the locality. The relevant Conservation of Habitats and Species Regulations 2017 (the Habitat Regulations) make it clear that if a plan or project has the probability of a direct or indirect significant effect on the internationally important interest features of the site, alone or in combination with other plans or projects, then the competent authority must make an Appropriate Assessment (AA) of its implications for the site which takes account of the site's conservation objectives.

Discussions with Natural England have revealed that information provided by the promoter to support the AA process was not sufficient to enable KCC to undertake the AA, in line with an agreed scope and in accordance with the Habitats Regulations. There is particular concern regarding the potential impacts on the designated sites which could result from the proposed de-watering production processes. Such impacts include changes to local ground water conditions (quality and availability) that are still largely unknown, and for which further study is required before it can be concluded that there are no such probability of adverse impact(s). It is considered that the increase in water bodies (formed by the extraction) and the decline in arable fields and vegetated shingle could also have a detrimental impact on the ability of the European sites to provide habitat capable of achieving the purpose (sustaining certain species) for which they were designated.

Much more detailed information would therefore need to be provided before the site could be allocated⁸. Furthermore, in accordance with 'avoid, mitigate, compensate' requirement of the

⁸ See Kent Mineral Sites Plan Appropriate Assessment, Ecus Ltd., November 2018

National Planning Policy Framework and requirements of the Habitats Regulations, alongside consideration of impacts, there would be a need to consider if there are alternatives to the aggregate resource being promoted. An assessment of information regarding alternatives submitted by the promoter has been completed and the findings are set out in Appendix 5. This assessment concludes that it would not be unreasonable for the sharp sand and gravel to be supplied from this location to be obtained from other sources, in particular marine. This conclusion is consistent with policy CSM2 of the KMWLP that recognises the state of resource depletion in Kent and notes that a 7 year sharp sand and gravel landbank can only be maintained for as long as resources allow (see below for further consideration of this matter).

Furthermore, consideration of a mitigation strategy is required that will address such matters of the ecological impacts on the actual areas of proposed extraction. This includes the promoted site's existing ecology (that contains Priority Habitat areas). This being a necessary consideration in addition to the SPA concerns under the Habitat Regulations.

Need for the aggregate mineral

The proposed site has been assessed against policy CSM2 that sets out the requirements for the supply of sharp sand and gravel. This policy was prepared in line with NPPF.

Calculations regarding supply and demand based on 2017 data, taken together with an 18-year landbank, suggest the shortfall is now in the order of 5.75mt for sharp sand and gravel⁹. The promoter of the site states that 3.1mt is available for allocation, although this would significantly reduce if Allen's Bank is withdrawn, given the estimated total reserves here being potentially up to 2.75mt. Clearly, there is a need to allocate the site on national mineral planning policy grounds. The adopted KMWLP, however makes it clear that whatever the requirement is [as updated by new Local Aggregate Assessment data] this will be planned for "*...while resources allow*" see Policy CSM 2 Supply of Land-won Minerals in Kent. Therefore, if the site cannot be allocated, the policy recognises that demand will instead have to be met from other sources, "*principally a combination of recycled and secondary aggregates, landings of MDA [marine dredged aggregate] , blended materials and imports of crushed rock through wharves and railheads. The actual proportions will be decided by the market*"

Water Environment

The proposed site has been assessed against policy DM10 of the KMWLP which requires that development should result in no deterioration and improved ecological status of all waterbodies within the site and/or hydrologically connected to the site. This policy was prepared in line with the NPPF.

The area is a low-lying area that has historically been defended against the incursion of the sea, then drained to form arable land behind the cusped foreland (of Dungeness). Therefore, the land has an inherent potential for flooding that led to the town of Lydd being historically built on the most elevated shingle ridge.

The extraction of aggregate from the land then become standing water bodies (artificial lakes), increases the flood water storage potential of the land. Though this effect is a marginal one given the limited amount of material removed from the land when compared to the scale of the remaining land volume. However, it can be said that in terms of the probability of flood risk, removal of the aggregates has a neutral impact, and does not increase in flood risk overall.

⁹ See Sharp Sand and Gravels Topic Paper 2018

The Environment Agency has reviewed the promotor's consultant report on flood risk (ref. Assessment of Flood Risk Prepared for; Brett Aggregates Limited, SLR March 2018) and has stated:

"The detailed Flood Risk Assessment (FRA) submitted by the promoter demonstrates that the sites lie within an area of Flood Zone 3 (high risk) that presently benefit from the presence of formal flood defences. In light of this residual risk of flooding, the FRA recommends that there should be no stock-piling of material within the floodplain, and that the site is restored to its existing topographical condition once the works are complete. Provided there is no loss of floodplain capacity or alteration of potential flood-flows during or after the mineral extraction, the agency would be unlikely to raise any concerns from a tidal flood risk management perspective. The agency confirm that the area is known to have a high groundwater level, the danger of groundwater flooding in and around the proposed sites has been considered. It is the agency's conclusion that the extraction of the mineral, and the subsequent creation of several flooded pits, will have no substantial consequences and are unlikely to result in an enhanced risk of flooding."

Potential groundwater impacts of concern are: aridification due to 'evaporative losses' and ground water 'draw down' effect from 'dry cell' extraction of the aggregate using active pumping out of the ground water; and a potential adverse impact on groundwater quality due to increased salinity. The impact of this could potentially be to adversely affect water supply and the ecological balance and characteristics of the wider SPA and SSSI areas.

The Environment Agency confirm that the Lydd Storm Beach deposits are a secondary aquifer. They go on to conclude that the aquifer "...is increasingly becoming fragmented and the promoted proposals to extract additional gravel would compound the impact that the previous workings have had on the aquifer in this locality". Therefore, it can be concluded that there has been some impact on this aquifer that would continue with additional workings coming forward.

Brett Aggregate Limited, the promoter commissioned a report by SLR consultants (ref. Preliminary Assessment of Potential Hydrogeological and Hydrological Impacts) to investigate this impact in relation to the promoted method of working the individual parcels of land. With regard to saline intrusion, the report concluded that due to the elevation of the area (low) and the proximity of the coast there is the potential for saline intrusion, subject to the permeability of the strata or geology.

Data collected from the area demonstrates that the Storm Beach deposits are fresh water while the lower permeable Tidal Flat Sand deposits in the area contain saline water from the event of their formation. Data also showed that closer to the coast (in East Sussex) coastal processes have given rise to saline incursion.

The report concludes that saline incursion into the Kent Romney Marsh Groundwater Body is predominantly due to coastal process and the differing permeability characteristics of the deposits. More localised saline impacts may occur if a saline Tidal Flat deposit is in close proximity to a de-watered Storm Beach sand and gravel extraction cell, though the overall low permeability of the Tidal Flat deposits means this would have a more local to extraction impact rather than a general one.

With regard to increased aridification due to draw down effects from de-watering of the extraction areas, the report makes clear that there will be an effect in the Kent area of the extraction sites. The magnitude of impact is still unclear. It recommends a 5-6-year baseline monitoring period is required to be established in the Kent area to understand what impact this would have on groundwater levels.

This lack of available data means that potential groundwater change as a result of the promoted site is not understood at this time.

The Romney Marsh Internal Drainage Board has raised concerns with regard to the potential for evaporative losses to impact the ground water levels and thus increase the aridification effect on the area. The Environment Agency has stated [verbally at meetings] that any enhanced evaporative losses, due to increased lake surface area, would be balanced by direct input by precipitation onto the lakes that is not being intercepted by the land. Thus, a direct and immediate input to ground waters; the overall effect of increased lake area is considered neutral in this regard.

Geomorphology

The proposed site has been assessed against policy DM2 of the KMWLP which requires that development likely to have any unacceptable adverse impact on a Site of Special Scientific Interest, will not be permitted unless the benefits of the development outweigh the impacts. This policy was prepared in line with the NPPF.

The promoted site will directly affect the Dungeness, Romney Marsh and Rye Bay (SSSI) in terms of the geological feature that makes this area important. The shingle ridge is a component part of the evolution of the Dungeness cusped foreland and may have been part of the barrier beach phase that accreted before the 13th Century. The promoted site would effectively destroy the shingle ridge. Consideration has been given as to whether it might be possible to adequately study the features of the SSSI prior to its removal by the development. This involved consultation with the University of Liverpool which had been instrumental in the designation of the SSSI. It was concluded that refinement of the promoter's proposed methodology for recording the scientific value of the feature appropriately was required. In any event such an impact on a SSSI can only be allowed if the benefits of the extraction outweigh the impact. Consideration of this matter is set out in Appendix 5 and it is concluded that the benefits do not outweigh the impacts and so, on this basis, the site cannot be allocated.

4.0 Conclusion - M2: Lydd Quarry/Allen's Bank Extension, Lydd

The main issues that the promoted site has identified during the detailed assessment process that give rise to concern for the appropriateness of the site for allocation in the Mineral Sites Plan are:

- Impact on the setting and character of the historic town of Lydd
- Severity of impact on the Dungeness, Romney Marsh and Rye Bay Special Protection Area (SPA) and Ramsar Site as a result of this proposed minerals allocation. and the requirements of the Habitat Regulations for consideration of alternatives
- Severity of loss of Dungeness, Romney Marsh and Rye Bay Site of Special Scientific Interest (SSSI)
- Importance of and potential loss of the archaeological interests of parcel 23 Allens Bank

Conclusions on these matters are set out below:

The character and overall setting of the historic town of Lydd and its environs would be altered by the progression of aggregate workings progressively working through parcels 16 to 23 with replacement of extant arable land with increasing artificial open water bodies. Screening of the working and mitigation of the change to landscape may not be possible, given the limited available overburden to form effective screening bunds and fact that substantive native tree planting may not be achievable (background groundwater salinity may preclude successful tree growth). However, closer to the

centre of the Lydd area, where there is evidence of more substantive existing tree growth, there may be more potential for planting with native species. It would appear that in order to significantly ameliorate the change to the landscape either reduction of the number of extraction parcels and/or increase stand-offs to the built-up area of Lydd will be needed.

This in turn could have a significant impact on the mineral yield of the promoted Option site and would erode justification for incurring some degree of unavoidable impact on general amenity of the area in order to release aggregate required to support the economy as expected by the NPPF. Overall it is considered that allocation of other sites and the availability of marine won aggregate means there is no overriding requirement to allocate the site and incur the largely unavoidable impact on the character and setting of the historic town of Lydd which be inconsistent with Policy DM 5 Heritage Assets of the KMWLP.

The impact on the SPA is considered to be one of largely an undefined indirect nature and hydrologically based. Adverse impacts on the SPA due to increased aridity and salinity are considered possible. Applying the precautionary principle inherent in the Habitat Regulations requires alternatives to be considered through the AA process. However, the potential hydrological impacts of concern require consideration to ensure that they have been objectively assessed as either giving rise for concern, or that the impacts are minor or absent. The Habitats Regulations require the County Council (as the recognised competent body in this instance) to assess if alternatives to the plan are available – such consideration is set out in Appendix 2 which concludes that alternative sources of supply are available.

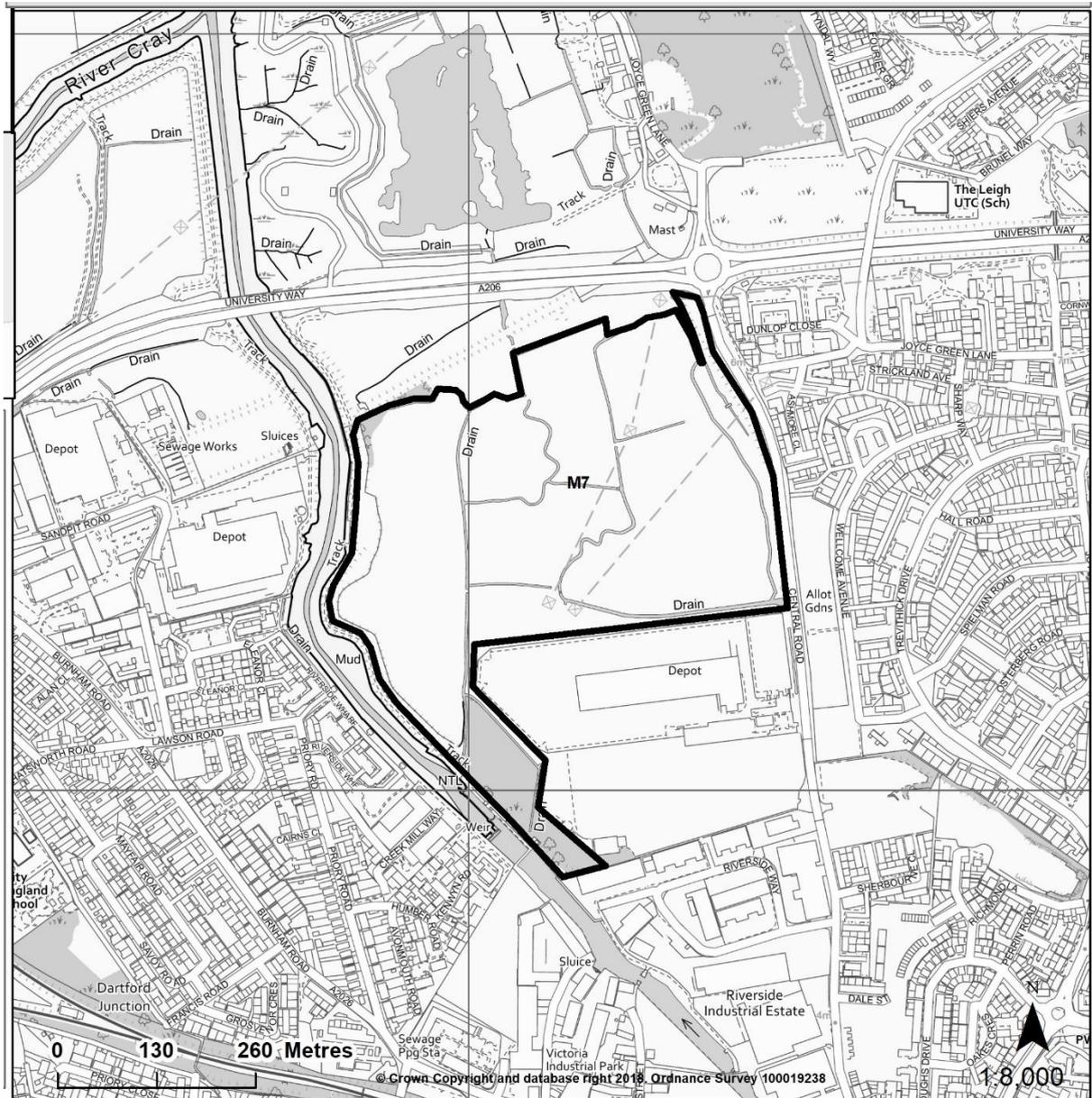
With regard for the direct loss of the SSSI feature, it can be concluded that there remains uncertainty as to whether the methodology put forward by the promotor's consultants would be sufficient to address the concerns raised by Natural England and the cautious comments made from the University of Liverpool. Therefore, unless there is an overriding need in the public interest to effectively destroy the SSSI by suppling aggregate materials and thus incur the loss the scientific resource, which is an integral part of the geomorphological evolution of the Dungeness cusplate foreland (and has been designated a SSSI on this basis), then it should not occur. The fact that alternative supply exists(as set out in Appendix 2) demonstrates there is no such overriding need in the public interest at this time.

The local socioeconomic effect of Lydd Quarry ceasing operation within two further years will no doubt have an effect, though arguably less than that of the promotor's estimates. Also, of the direct and indirect 54 FTE posts that exist, 31 are HGV related and could continue to operate transporting aggregates to the market from other sources (wharves). Others, including plant operatives, may be re-deployed, particularly at the new aggregate facility at Newhaven when it comes onstream. The effect on the economy of Folkestone and Hythe overall, if the site were to cease operation, appears to relatively marginal. Though the very local impact on Lydd in employment terms is unknown.

The Option M2 Lydd and Allens Bank site is not considered suitable for allocation in the Mineral Sites Plan in that the impacts on the historic town of Lydd, the potential impact on the SPA/Ramsar and SAC that can be negated with alternative aggregate supply that the adopted KMWLP has identified in Policy CSM 2 and loss of the SSSI and the archaeological potential of Allens Bank are not sufficiently justified at this time.

M7: Land at Central Road, Dartford – Sharp Sand and Gravels

Site Location Plan



1.0 Matters addressed by Detailed Technical Assessment

Initial Assessment

The initial assessment of the site¹⁰ identified a number of matters which would requiring further consideration, these were:

¹⁰ See Mineral Site Selection – Initial Assessment - Stages 1 and 2 of the Site Identification and Selection Methodology, November 2017

- Impact on landscape
- Impact on biodiversity
- Impact on historic environment
- Impact on water environment
- Impact on air quality
- Loss of grade 2 and 3 quality soil
- Impact on local amenity
- Impact on Public Rights of Way (PROWs)
- Impact on utilities/services
- Impact on Air Quality Management Areas (AQMAs)
- Access – impact on highway network
- Cumulative impact with other developments taking place in the area

Matters Raised During the Options Consultation

Views of key organisations

A summary of the responses from key organisations, including statutory consultees, is set out below which sets out the nature and extent of the concerns of such consultees especially with regard to the matters listed above.

Environment Agency – Object to the site in the absence of information to demonstrate that the ecology of the area will not be adversely impacted. The site is designated as a Local Wildlife Site (LWS), and no information is provided to address this.

This site overlies the chalk aquifer and is in SPZ2 for a public water abstraction borehole. Relevant constraints would be imposed on a specific application for shallow sand and gravel deposits and restrictions on depth of excavations, pollution control methods and ways of working to safeguard against aquifer disturbance, or impacts on water quality, would need to be conditioned in any permission.

Flood defences exist adjacent to the site. Detailed information would be required about the distance of extraction from the flood defences and how any extraction may impact the integrity of the flood defence.

Natural England – the allocation is likely to:

- result in a partial loss of Coastal and Floodplain Grazing Marsh priority habitat.
- have indirect impacts to the adjacent Coastal Saltmarsh priority habitat.
- Result in indirect impacts to the adjacent to Deciduous Woodland priority habitat.

Natural England recommends that further assessment of the potential implications of this allocation on priority habitats/habitats of principle importance is undertaken.

Highways England

Highways England have reserved their final comments to the planning application stage, however have expressed concern with proposals that have the potential to impact the safe and efficient operation of the Strategic Road Network (SRN), in this case the M25 and in particular Junction 1a. Central Road is located approximately some 2km from the junction, access to the site would be

obtained from Central Road, which adjoins directly to the A206 Bob Dunn Way and then onto junction 1a of the M25.

This area is particularly sensitive for traffic congestion issues which has a negative impact on air quality. As such, several areas around Dartford have been designated as AQMA's, including the Dartford Town Centre which is to the south of the site, and within the London Borough of Bexley to the west.

It recognises that cumulative impacts in terms of increased traffic movements would need to be considered and appropriately mitigated.

Additional details of potential traffic impact have been prepared by the promoter of the site; Highways England has not provided any further comment.

Dartford Borough Council - The site option has identified 23 hectares of fresh marsh land to the south of Bob Dunn Way. It forms part of the Northern Gateway Strategic site in Dartford's Local Plan (Core Strategy, 2011) and is protected through the Local Plan as designated Borough open space (DP24 Development Policies Plan 2017) and a local wildlife site (DP25). The site is identified as an area of green space within the strategic site (Core Strategy Policy CS3). This strategic site has the benefit of planning consents which have largely been built out. Planning conditions set out in one of these consents provides for management and maintenance of the Dartford Fresh Marshes as part of the overall development, through an ecological management plan.

A 25 year plan has been approved and includes conditions to conserve and maintain features of ecological value including the ditch network and wet grassland. This requirement should be noted in technical assessment. The planning status of the site suggests that the 'justified' assessment of this site is considered questionable by the Borough Council.

Dartford Borough Council (EHO) – The site would be accessed via Bob Dunn Way, a heavily trafficked route where nitrogen dioxide pollution levels were recorded at being 46.9 µg/m³ in 2016 (compared to an objective level of 40 µg/m³). The proposed site would introduce further HGV movements per day through an area of poor air quality.

The route along Bob Dunn Way would provide access to the A282 (M25) at junction 1a. This junction is often subjected to congestion as a result of incidents occurring at the Dartford crossing and there is concern that drivers would choose to drive through Dartford Town Centre (through Air Quality Management Areas) to avoid this congestion.

There is also concern that noise from the quarrying activities would cause disturbance to residents in Temple Hill.

CPRE – Have serious concerns over the allocation of the site. Southern part of the site lies within the adopted Dartford Core Strategy Northern Gateway Strategic Site. The western part of the site lies within an area designated as a Biodiversity Opportunity Area.

The Darent Valley Footpath runs along the west of the site and extraction will adversely impact on views from the path changing the view from looking over the grazing marsh to open water.

Kent Wildlife Trust (KWT) - The proposal overlaps with a large area of Local Wildlife Site DA04 "Dartford Marshes". This is a site of County Importance for nature conservation and represents **direct loss** of a large portion of a locally designated site which cannot be mitigated for. KWT strongly object to the allocation as it is not in conformity with national planning policy or planning guidance.

RSPB - Allocation of the site will result in direct loss of local wildlife sites and therefore RSPB are supportive of the Kent Wildlife Trust's representations on this matter.

British Horse Society – The bridleway to the east of the marshes should be kept and maintained for such use.

Request that diverted footpaths be upgraded to bridleways. Also request that the restoration makes use of the opportunity to provide new rights of way, road side margins and or/enhancement of the existing routes.

KCC Advisors

In undertaking this detailed assessment, advice has been sought from a range of technical specialists who advise the County Council on planning matters. This includes advice from on biodiversity, Public Rights of Way, noise, air quality, landscape, heritage, water resources, stability and highway and transportation interests. The views received have informed the assessment and the discussion section below. Several related standalone specialist reports have been prepared and have been published as background documents. The work has also been informed by the Project's Sustainability Appraisal work.

Views of Elected Representatives

KCC Member – David Butler

Advises that he "raise issues regarding the consultation and any plans to move this forward, and strongly voice my concerns in any form on these sites being used for this purpose.

Dartford North East has the highest traffic volume in the County and is in gridlock on most days due to the Dartford Crossing; for this reason alone it should not be considered a suitable site.

The site is in very close proximity to a housing development, This site has recently had a national TNT depot built and I already receive complaints regarding noise, pollution and overall objections.

Dartford North East has had huge construction activity over the last 5 years and will continue to for the year ahead, this will add more noise and more traffic to an already overloaded network, and a further deterioration to local air quality and overall quality of life for residents in Dartford North East and the wider Dartford.

I urge you to take this into careful consideration"

Dartford Borough Council – Jeremy Kite, MBE, DBC Leader

DBC objects to the potential allocation. There is significant local concern at the intensity of development taking place in the Borough at this time. This is leading to the residents of Dartford experiencing adverse impacts on amenity and quality of life.

The site identified in the Minerals Sites Plan Options consultation is identified as green space in the Dartford Local Plan. As the area of the site is closely related to large development sites which are well advanced, it provides much needed relief for the residents in an area of great change and intense development pressure. The Central Road Site (M7) has been planned as an integral part of the development providing for the open space needs of that scheme.

The open space needs of the local community appear not to have been taken into account. The potential loss of the open space and extraction activity in close proximity of the residential area is inherently unacceptable to the amenity of these residents and the wider community of the Borough. Inevitable dust and noise from the extraction would be compounded by pollution from the HGV's transporting materials from the site, in an area which already suffers from heavy congestion and Air Quality Management Area (AQMA) pollution level exceedances.

It is understood that mineral extraction has to take place to meet needs of society, however questions whether it is right that it is proposed within the densest and fastest growing part of Kent, where transport and development pressures are reaching capacity.

It is considered unacceptable that the small district of Dartford should have to be responsible for providing 25% of the required aggregates supply for the county whilst making an extensive contribution to housing delivery. It is not possible for the area to meet these competing and intensely impacting forms of development. The Mineral Sites Plan is being prepared in an uncoordinated manner with regard to the wider planning of the area given current National Planning Policy, however the Mineral Sites Plan cannot be prepared in a vacuum and the wider planning issues must be taken into account in preparing this Plan.

Views of local residents

Concerns raised by local residents during the options consultation included:

- Adverse impact on the local amenity due to noise, dust and vibrations
- Adverse local health impacts
- The cumulative impact with other development pressures in the area (including quarrying) will have an adverse impact on residential amenity
- General environmental blight would be caused to the area
- Adverse impact on already highly stressed highway network would be unacceptable
- Proximity to the M25 and QE2 bridge mean that any additional traffic would be unsustainable
- Adverse impact on air quality
- Contrary to the regeneration agenda for the Dartford area
- Adverse impact on human health
- Disruption to PROW (public access riverside walk)
- Skeptical about the quality of any restoration
- Increased local Flood Risk
- Does not conform to planning policy on the management of marshland
- Adverse impact on flora and fauna of the site
- Marshland should be protected
- Designated as a local wildlife site and should be left undisturbed
- Visual amenities of the undisturbed expansive open space should remain
- Serves as green space which should be protected
- Loss of property value in the locality of the site
- Site is of archaeological importance

2.0 Sustainability Appraisal

In accordance with statutory requirements a sustainability appraisal (SA) has been completed which considers how well the site performs against certain sustainability objectives. The detailed results of the SA are set out in a separate document.

3.0 Discussion

This section addresses matters raised above as well as those identified during the initial site assessment which are key to assessing the suitability of the site for allocation in the Kent Minerals Sites Plan.

Amenity

The promoted site has been assessed against policy DM11 of the KMWLP which requires that mineral development should not generate unacceptable impacts from noise, dust, vibration, odour, emissions, illumination, visual intrusion, traffic or exposure to health risks and associated damage to the qualities of life and wellbeing to communities and the environment. Similar policy protection is provided within the NPPF.

The site is surrounded by residential properties on its eastern and western boundaries, some of which are 50m away from the site. These are likely to be negatively impacted by way of noise and dust from the quarrying activities and the associated HGV movements. Concern in respect of amenity impact were expressed in many of the representations received. Potential disturbance to amenity was also raised by Dartford BC's Environmental Health Officer (EHO). The promoted site forms part of the open space requirements for strategic development that has taken place in the area. Its long-term protection from development is a significant part of the Borough's adopted local plan amenity provisions.

In respect of noise, the County Council's noise consultant (Amey) advises that mitigation by way of stand-off and screening would be required to address noise impacts, and that in principle acceptable levels of noise should be achievable.

With regard to dust and air quality considerations, the County Council's air quality advisor notes that as extraction would be from marshland the sharp sand/gravel is likely to be wet which will aid dust suppression. Extraction activity could however be constrained by existing residential receptors on to the east and west of the site which are sensitive to deposited dust and that Dartford is subject to AQMAs across the Borough which could constrain access to the site. Attention is drawn to traffic congestion in the locality which leads to a considerable number of HGV vehicles idling on local roads. Concerns regarding the impact on air quality through HGV movements are identified and that these impacts may be unmitigable.

Dartford Borough Council's EHO similarly raises concerns regarding the impacts on air quality, particularly if the vehicles were to choose to travel through the AQMA to avoid the congestion along Bob Dunn Way. The site would have to be accessed via Bob Dunn Way, a heavily trafficked route where nitrogen dioxide pollution levels were recorded at being 46.9 µg/m³ in 2016 (compared to an objective level of 40 µg/m³). The route along Bob Dunn Way provides access to the A282 (M25) at junction 1a. This junction is often subjected to congestion as a result of incidents occurring at the Dartford crossing. There is concern that HGV drivers would choose to drive through Dartford Town

Centre (through AQMA) to avoid this congestion. As a result, the proposed site would result in additional HGV movements through an area of poor air quality.

The site lies in close proximity to the County boundary with the London Borough of Bexley lying to the west. The entire Borough is designated an Air Quality Management Area. Traffic leaving the site and travelling westwards into Bexley would pass through the Bexley AQMA.

Visually, there would be a significant change to the appearance of the landscape which would be difficult to mitigate, given the proximity and height of residential property (which includes 3 and 4 storey apartment blocks) that overlook the site. Clear views of operations are likely to be available from these properties, and from the public rights of way that run around the eastern and western boundaries of the site. It is unlikely that the adverse effects from such change in view could be adequately mitigated against, due to the height of property windows and the lower level of the site than the surrounding land.

Restoration of the site would involve loss of the marsh area and the opening up of open water bodies and in the extraction phase, there would be a loss of the strategic open space and consequent impact upon local amenity.

In conclusion, the close proximity to a large residential area the lack of certainty concerning the ability to mitigate amenity impacts to acceptable levels presumes against allocation of this site.

Highways and Transportation

The proposed site has been assessed against policy DM13 of the KMWLP which requires that mineral development satisfy that the access arrangements are not detrimental to road safety, that the highway network is able to accommodate the traffic flows and will not give rise to unacceptable impact on the environment or local community and that emission control and reduction measures are proposed, particularly within an AQMA. Similar policy support is provided for within the NPPF.

Locationally, the site would access a strategically important part of the national road network (M25/J1A Dartford Crossing), which is particularly sensitive to congestion. KCC Highways as local highway authority objects to the proposed allocation. It advises that the local highway network in this location is extremely sensitive and any impact to the network and the air quality must be mitigated. Additional information is required before the Highway Authority can be satisfied in principle that the allocation is acceptable, given the air quality sensitivities in Dartford and around Junction 1. This includes:

- A capacity assessment of the Bob Dunn Way/Joyce Green Lane/ Central Road roundabout that takes account of the committed development of the recently approved application: KCC/DA/0320/2017, Joyce Green Quarry, Joyce Green Lane, Dartford, Kent, DA1 5PN.
- Further details of the access arrangement details to ensure a safe suitable point of access can be achieved, with appropriate visibility splays to be provided. Pedestrian and cycle access must also be considered when designing the access.

This information has not been provided and in the absence of this detailed information, the impact on the local highway capacity cannot be fully assessed.

Highways England have advised that any mineral site allocations need to ensure that they do not impact the safe and efficient operation of the SRN, in this case the M25 and in particular Junction 1a. It is noted that Central Road is located approximately some 2km from the junction and that access to

the site would be obtained from Central Road, which adjoins directly to the A206 Bob Dunn Way and then onto junction 1a of the M25. This area is particularly sensitive for traffic congestion issues which has a negative impact on air quality. As such, several areas around Dartford have been designated as AQMA's, including the Dartford Town Centre which is to the south of the site, and within the London Borough of Bexley to the west. Note that the air quality is considered in the amenity section above.

In light of the Highway objection, the County Council considers that even modest traffic increase will have potentially sizeable impacts on traffic conditions and air quality, particularly when viewed cumulatively with other planned development in the Dartford Local Plan. The site cannot therefore be considered suitable for allocation as a mineral extraction site.

Biodiversity

The proposed site has been assessed against policy DM3 of the KMWLP which requires that proposals do not result in unacceptable adverse impacts on Kent's important biodiversity assets. This policy was prepared in line with the NPPF which sets out similar criteria.

The site is grazing marsh, a priority habitat and a habitat of principal importance under the Natural Environment and Rural Communities Act. It is also identified as a local wildlife site – Dartford Marshes and is considered to have national importance for its water vole population. The site currently supports a wide range of flora and fauna, including a number of rare plant species, important wintering and breeding bird populations and water voles. The proposal would result in potential loss of the Coastal and Floodplain Grazing Marsh Biodiversity Opportunity Areas (BOA) Priority habitat. Development is also likely to have indirect impacts on the adjacent coastal saltmarsh and deciduous woodland priority habitats.

The promotor submitted information on ecology and how the potential impacts would be mitigated. This report demonstrated the ecological importance of the site and suggested two options for mitigation, these were the creation of off-site wetland habitat (unspecified) within existing local grazing marsh or the implementation of a phased approach with mitigation on-site (by enhancing the retained habitat). The report also committed to the reinstatement of the grazing marsh on completion of the works, though the site itself would have new open water areas and thus a net loss of current grazing marsh area.

The Council's Biodiversity advisor, however remains concerned that there is no available land to create an off-site wetland habitat and due to the ecological interest of the site, it will be difficult to mitigate for the loss of the habitat within a smaller proportion of the site (even with enhancements). The mitigation area is likely to be damaged during the extraction works due to the size of the site. It concludes that mineral extraction at this site would result in the loss of this important habitat, which is one of the last of its kind in Kent.

It is noted that the Environment Agency objects to the allocation due to the impact on biodiversity. Furthermore, whilst not the statutory body for local designations, Natural England recognised that the site would impact on several areas of priority habitat and recommended that high level ecological survey work be undertaken.

The County Council concludes that the impact of the proposal on biodiversity interests is significant, as such the site is not acceptable in principle to allocate.

Water Environment

The proposed site has been assessed against policy DM10 of the KMWLP which requires that development should result in no deterioration and improved ecological status of all waterbodies within the site and/or hydrologically connected to the site. This policy was prepared in line with the NPPF.

The use of wet working negates the need to de-water the active quarried area.

Flood risk

The site is within Flood Zone 3 (1% or 1 in 100 annual probability of flooding). The Environment Agency made no adverse comments regarding flood risk, acknowledging that sand and gravel extraction represents a “water compatible” development and would not increase the overall flood risk characteristics of the site and the wider area. Further information, detailing how the proposal could impact the integrity of nearby flood defences would be required should the site be allocated.

The County Council’s Flood Risk Assessment carried out in July 2018, recognised that the land drains present on site may need to be diverted to facilitate the development, and that the land drain to the eastern boundary of the site should be retained. The report concluded that further hydraulic modelling would be required to establish the impact of the development on the wider water environment. This view was shared by the Environment Agency who requested further information on the hydraulic relationship of the site on the River Darent and the wetland/marshland to the north of the site.

The site overlies a chalk aquifer and is in SPZ2 for a public water abstraction borehole. The site is bounded in the west by the River Darent. Should the site progress, evidence would be necessary at planning application stage to demonstrate that the hydrology and water quality of the river will not be affected by mineral extraction operations or restoration plans, that activity would not affect the aquifer or its water quality and that appropriate pollution control measures could be employed

The County Council concludes that the information requested to establish the impact on the water environment is a matter that could be addressed at planning application stage. In principle, there is no overriding water resource interest that renders the site unsuitable for allocation.

Historic Environment

The proposed site has been assessed against policy DM5 of the KMWLP which requires that there should be no unacceptable adverse impact on Kent’s historic environment taking account of mitigation and compensation and heritage assets be conserved in a manner appropriate to their significance. This policy was prepared in line with the NPPF which sets out similar criteria.

Historic England has been consulted on the proposal to allocate this site for mineral working and it has not raised any specific concerns.

The Council’s Archaeological Officer considers that there is potential for Palaeolithic remains associated with prehistoric activity. Further work is required to establish the potential importance of any remains and the acceptability of any mitigation. In the absence of this, it is not possible to demonstrate compliance with policy requirements. Normal planning permission conditional pre-commencement controls would be able to ensure that any such remains are investigated appropriately

Land Stability

The proposed site has been assessed against policy DM18 of the KMWLP which expects that planning permission for development will not be granted unless it is demonstrated that development will not result in land instability. This policy was prepared in line with the NPPF.

The County Council's land stability report includes consideration of the site's proximity to sensitive receptors such as sewage lines, electricity pylons and Thames Water Infrastructure. It concluded that the site itself was considered to have low risk of instability, however with extraction this risk is raised to moderate in terms of the site itself and neighbouring properties. Neighbouring infrastructure could be impacted such as the electricity pylons within the site, the Darent River Levees Sewer, Bob Dunn Way Embankment and Thames Water Infrastructure. These features could be mitigated with appropriate standoffs and diversion where necessary. Details of which could be a matter for any planning application stage. An application would need to be accompanied by a quantitative slope stability assessment.

In conclusion, there is no overriding case not to allocate the site based on land stability matters at this time.

PROW

The proposed site has been assessed against policy DM14 of the KMWLP which requires that where proposals impact a PROW, they will only be permitted if; satisfactory prior provisions for diversion of the PROW can be made which are convenient and safe for the PROWs users, an acceptable alternative route can be provided during operations and restoration, and opportunities to improve countryside access are taken wherever possible. This policy was prepared in line with the NPPF which sets out similar criteria.

A public bridleway (DB4) sits to the east of the site. This is separated from the site area by Central Road, so is unlikely to be directly impacted by the proposals, however its setting will be affected. Public footpath DB1 runs along the western boundary (following the course of the River Darent) of the site which is more likely to be affected. Mitigation would need to be employed in both cases, most likely a combination of screening and stand offs, although it is recognised that it is unlikely that views into the site from the paths can be fully mitigated.

KCC PROW officers have made no adverse comments on the proposal, and as such the County Council concludes that the impact on PROW's does not constitute a reason for not allocating the site.

Landscape

The proposed site has been assessed against policy DM2 of the KMWLP which aims to ensure that there are no acceptable adverse impacts on important landscapes. This policy was prepared in line with the NPPF which sets out similar criteria. Impacts on visual amenity are assessed against policy DM11 that seeks to ensure that minerals development is unlikely to generate unacceptable adverse impacts from visual intrusion.

The site forms part of the Northern Gateway Strategic site (NGSS) in the Dartford Local Plan (Core Strategy, 2011) and is protected as designated Borough Open Space (policy DP24) in the Development Policies Plan 2017 and a local wildlife site (policy DP25). The site is also identified as an area of green space within the Strategic Site to which Core Strategy Policy CS3 applies. The NGSS site now has the benefit of planning consents which include the area of the Dartford Fresh

Marshes. The consents have largely been built out, leaving the remaining area to form an important and protected undeveloped area within the local landscape. The Borough Council has secured a long term management plan to ensure that the land is secured for the open space requirements to support the urban growth in this part of Dartford. This agreed 25 year management plan requires the conservation and maintenance of features of ecological value including the ditch network and wet grassland.

The County Council's landscape advisor's consider that development of the site would have a significant impact on the priority habitat inventory and local wildlife site designation. Any habitat creation through restoration and careful choice of planting and landscape design would enable the adverse effects caused by the extraction activities to be mitigated. However, there is significant doubt that the proposed ecological imitation in the restoration plans proposed would be appropriate given the LWS designation. Whilst, in the longer term, mineral extraction would enable the land to remain open and free of built development, the landscape would be significantly altered reducing its local value that the local plan strategy has identified. On this basis, the County Council considers that the mineral development of the site would be contrary to the objectives of Policy CS3 of the adopted Dartford Borough Local Plan.

The County Council concludes that the impact on the local landscape would likely to be negative, in that the inevitable change to the landscape would not be enhanced by increased ecological value and the site's local landscape value, as undisturbed open space, would have been significantly eroded and would not be in accordance with Policy DM2 Environment and Landscape Site of International, national and Local Importance.

Soil Quality

The proposed site has been assessed against policy DM1 of the KMWLP which requires that proposals demonstrate that there is no unacceptable adverse impact on the use of other land for other purposes possible. This policy was prepared in line with the NPPF.

Natural England's Agricultural Land Classification Map states that the site comprises grade 2 (very good) and grade 3a (good to moderate) agricultural soil. If the site is worked the soil quality will be lost if restoration is proposed to be to wetland habitat. The site is however in use as marshland and as considered above has an important open space function to support urban growth within the Dartford area. Mineral development at this site is unlikely to result in an overriding loss of agricultural soils.

Cumulative Impact

The proposed site has been assessed against policy DM12 of the KMWLP which expects that mineral development should not result in an unacceptable adverse, cumulative impact on the environment or communities. This policy was prepared in line with the NPPF which sets out similar criteria.

It is recognised that mineral working has taken place in the surrounding area of the Darent Valley in the past, with particular regard to the ongoing quarrying operation at Joyce Green Quarry, immediately to the north of the promoted site. The KMWLP notes that cumulative impacts may occur where separate developments occur near to each other and there is a need for such impacts to be taken into account. In this instance, the assessment of potential cumulative impacts which could arise from development in this location relate to the impacts from HGV movements and the

consequential impact on air quality. From the evidence available these would give rise to unacceptable cumulative impact.

Need for the Mineral

The proposed site has been assessed against policy CSM2 that sets out the requirements for the supply of sharp sand and gravel. This policy was prepared in line with NPPF.

Calculations regarding supply and demand based on 2017 data, taken together with an 18-year landbank, suggest the shortfall is now in the order of 5.75mt for sharp sand and gravel¹¹. The yield from this site is estimated to 0.9m tonnes which would make a significant contribution to supply requirements.

Whilst it is recognised that there is a need to allocate the site on national planning policy grounds in respect of mineral need, the adopted KMWLP Policy CSM2 makes it clear that the requirement will be planned for “... *while resources allow*”. It therefore follows, that if the site is unacceptable in principle and cannot be allocated, the adopted policy recognises that demand will be met from other sources. These are principally a combination of recycled and secondary aggregates, landings of MDA (marine dredged aggregate), blended materials and imports of crushed rock through wharves and railheads. The actual proportions will be decided by the market.

4.0 Conclusion - M7: Land at Central Road, Dartford

The information submitted in support of this promoted site is limited. Whilst some matters are capable of being addressed in detail at the planning application stage, the County Council considers that from the information available, the site gives rise to unacceptable impacts on a number of key matters. In particular, these relate to highway impacts on Bob Dunn Way (A206) and the M25 Junction 1a (Dartford Crossing), loss of biodiversity habitat, impact upon Local Wildlife Sites (LWS) and UK Biodiversity Action Plan (BAP) interests, impacts on residential amenity, air quality impact on AQMAs and conflict with Local Plan open space objectives

The County Council is therefore unable to conclude that the M7 site At Central Road, Dartford is acceptable for allocation. The site is not identified as a site in the Pre-Submission draft of the Mineral Sites Plan.

¹¹ See Sharp Sand and Gravels Topic Paper 2018

- Loss of grade 3 quality soil
- Impact on local amenity
- Impact on the Green Belt
- Impact on Public Rights of Way (PROWs)
- Cumulative impact with other developments and quarrying operations within the area

Matters Raised During the Options Consultation

The matters raised during the public consultation on this site are summarised below.

Views of key organisations

A summary of the responses from key organisations, including statutory consultees, is set out below which sets out the nature and extent of the concerns of such consultees especially with regard to the matters listed above.

Environment Agency (EA)

Biodiversity: The Alder stream passes through the middle of this site. The EA would oppose the creation of online lakes [that would have continuity with the Alder Stream (KCC)]. There is the potential for river restoration to be delivered as part of the exploitation of this site subject to other concerns including flood risk. Further information required about the proposal to be able to assess it fully.

Groundwater: The site overlies the gravel aquifer and is near the edge of an SPZ3 for a public water abstraction borehole. Relevant constraints would be imposed on a specific application for restrictions on depth of excavations, pollution control methods and ways of working to safeguard against aquifer disturbance or impacts on water quality.

Water Resources: The site poses no immediate Water Resources risk provided that the final restoration plan fully recognises the need to ensure that the Alder Stream's function, alongside smaller ditches and ditches, are retained.

It is anticipated that appropriate mitigation measures, substantiated through a detailed programme of monitoring, will be necessary in order for the applicant to demonstrate with certainty that the Moat Farm workings, both during the operational and restoration phases do not have a detrimental impact.

The hydraulic relationship between the previously worked excavations [now flooded], to the immediate north and the local drainage ditches, some of which may be ephemeral will need to be verified. This need is particularly relevant should dewatering be employed and as such the applicant will need to develop a sufficiently robust mitigation plan so as to ensure that local levels are not compromised to the extent that water dependent ecosystems are derogated.

The restoration plan indicates an ambition to restore to phased wetland. There will be a need to demonstrate how the wetlands will be managed so as not to compromise the integrity of the Alder Stream and the function of those unnamed drainage ditches in the immediate vicinity of the site.

A Licence will be required from the Environment Agency, should there be a requirement to dewater at Moat Farm.

Given that the site is also within an aquifer SPZ waste activities are to be avoided.

Flood Risk: The site falls within a High Risk Flood Zone (FZ3). The aggregate materials should be extracted in a way which does not increase flood risk. A detailed Flood Risk Assessment, approved by the EA, must demonstrate that development would not increase flood risk to the area.

Natural England – The site does not fall within any SSSI/protected landscape impact risk zones so is unlikely to impact any statutory designated nature conservation sites or protected landscapes. It is considered that there may be an opportunity to restore the site to wetland/open water habitat.

Tonbridge and Malling Borough Council

Cumulative impacts: In this part of the borough the concern is the cumulative impacts of several sites operating at the same time which could be severe if not properly planned for and managed. Of particular concern is the cumulative impacts of noise, dust and vibration from the mineral operations and transportation on the amenity of nearby residents. In addition, cumulative impacts on flood risk, including surface water flooding should be assessed. Options for minimising these impacts and preventing unacceptable adverse impacts need to be fully explored.

Landscape: The sites lie within close proximity of the High Weald AONB and there are several long-range vistas that can be enjoyed from the vicinity of the site. It is important that these are respected during the operation and restoration of the sites and that unacceptable adverse impacts are prevented.

Heritage: There are Listed Buildings within close proximity of the site. Every effort should be made to protect these important heritage assets and their settings and unacceptable adverse impacts should be prevented.

Tunbridge Wells Borough Council (TWBC) - TWBC is concerned that current development and future growth will be impacted by the mineral extraction activity from this site. TWBC have particular regard to the following, both in terms of the impact of the site and in terms of cumulative impact, they are:

- Transport links, including highway safety and the operation of the highway network.
- Residential amenity, including in terms of impact via noise, dust, vehicle movements, air quality, vibration, etc.;
- Landscape impacts, including the setting of the High Weald Area of Outstanding Natural Beauty;
- Heritage: there are areas of potential archaeological importance within the vicinity of the allocations, as well as a number of Listed Buildings (some of which form part of historic farmsteads), the settings to which are important;
- Ecology, including Local Wildlife Sites;
- Trees, including areas of Ancient Woodland;
- Flooding, both in terms of surface water and groundwater;
- Pollution, including in terms of the aquifer protection zone;
- Impact on the Green Belt, particularly having regard to the potential growth through the new TWBC Local Plan.

South East Water (SEW) - The quality of the water abstracted in the vicinity of the water courses close to the site should not be impacted. Further hydrological assessment was undertaken for the adjoining Option site (M13 Stonecastle Farm) to address if extraction of the mineral resources posed

any risk of adverse impact to the potable supply which addressed SEW's concerns in principle.

CPRE Kent - allocation opposed on the following grounds:

- This is a remote and isolated site for which access will be difficult;
- Impact on local roads and neighbourhood from HGVs;
- Impact on public right of way;
- Potential visual impact from the High Weald AONB;
No details of any buildings and processing plant which may impact the openness of the Green Belt and so be in conflict with national Green Belt policy.
- Negative cumulative impact taking account of the Stonecastle Farm site.
Consideration should be given to restoring the site to agriculture.

Kent Wildlife Trust -

- Detailed mitigation strategies required to avoid any negative impact upon biodiversity will be required with any planning application. Where this mitigation is not possible, or it is not possible to avoid negative impact through mitigation measures then a compensation package must be provided and detailed in advance of any planning approval.
- NPPF requirement for enhancement of biodiversity should be sought wherever possible as well as "net gain" for wildlife.
- Reference should be made to Biodiversity Opportunity Areas when restoring land after mineral extraction to help focus habitat creation on habitats and species of County importance.
- The opportunity for habitats of nature conservation interest created by wet restoration should include consideration of future management after the site has been restored, including the financial information relating to long-term management.

KCC Advisors

In undertaking this detailed assessment, advice has been sought from a range of technical specialists who advise the County Council on planning matters. This includes advice on biodiversity, Public Rights of Way, noise, air quality, landscape, heritage, water resources, stability and highway and transportation interests. The views received has informed the assessment and the discussion section below. Several related standalone specialist reports have been prepared and have been published as background documents. The work has also been informed by the Project's Sustainability Appraisal work.

Views of local residents

Concerns raised by local residents during the options consultation included:

- Adverse impact on the local amenity by way of noise, dust, visual intrusion and vibrations
- Adverse impact on the historical assets and the archaeology of the area
- Strain on the local highway network, local roads are too narrow and unsuitable; the continued use of the access onto the A228 Whetsted Road is unacceptable
- Disruption of the landscape and on the High Weald AONB
- Adverse impact on the Green Belt
- Adverse impact on local water resources
- Adverse impact on flora, fauna and fragile geological interests

- Lack of economic viability of mineral deposit
- Adverse impact on quality of life and a cumulative impact with other workings that is unacceptable
- Poor restoration record at nearby sites, reed bed planting along artificial lake margins are a significant change to the landscape
- Adverse impact on PROWs

2.0 Sustainability Appraisal

In accordance with statutory requirements a sustainability appraisal (SA) has been completed which considers how well the site performs against certain sustainability objectives. The detailed results of the SA are set out in a separate document.

3.0 Discussion

This section addresses matters raised above as well as those identified during the initial site assessment which are key to assessing the suitability of the site for allocation in the Kent Minerals Sites Plan.

Amenity

The promoted site has been assessed against policy DM11 of the KMWLP which requires that mineral development should not generate unacceptable impacts from noise, dust, vibration, odour, emissions, illumination, visual intrusion, traffic or exposure to health risks and associated damage to the qualities of life and wellbeing to communities and the environment. Similar policy protection is provided within the NPPF.

The site is remote from any main areas of local residential receptors. The nearest dwelling is Moat Farm to the south around 200 metres away although it is screened by existing farm buildings. There are some agricultural workers' residential caravans within Moat Farm which would be within 50-60 metres from the site.

It is recognised that air quality is good and local sources of pollution are largely confined to agricultural sources and local road traffic. There are receptors on Whetsted Road to the south (500m), but such is the distance any dust transported off-site would be well dispersed. Generation of dust is expected to be minimal from extracted sand and gravel particularly if transported in enclosed conveyors. In addition, the mineral would be wet worked and thus would be self-mitigating in dust generation terms at the point of extraction. Also, the mineral would be transported northwards to the processing plant at the adjoining site (Stonecastle Farm) away from the seasonal worker accommodation at Moat Farm.

The ambient noise climate is likely to be low due to the remoteness and any mineral development may require mitigation to eliminate potential adverse noise impact particularly with regards to the agricultural workers' accommodation. Consideration will need to be given to the site access and haulage routes in order to avoid adverse noise impact from HGVs passing through Five Oak Green and Whetsted which may be problematic due to the local road network not being appropriate for HGV use. Overall it is considered unlikely that noise impacts would cause any unacceptable impacts on the local amenity.

The cumulative impact of emissions from the increase in HGVs at Stonecastle Farm Quarry to where the extracted material will be conveyed would be required. The protection of health and amenity from HGVs is considered to be fully achievable. It is considered that appropriate mitigation against any potential adverse impacts from extraction operations are fully achievable.

It is concluded that mitigation is likely to be achievable, and it is unlikely that any amenity impact would be so severe that the site should not be developed.

Note that consideration of impacts on visual amenity are considered below.

Highways and Transportation

The proposed site has been assessed against policy DM13 of the KMWLP which requires that minerals development satisfy that the access arrangements are not detrimental to road safety, that the highway network is able to accommodate the traffic flows and will not give rise to unacceptable impact on the environment or local community and that emission control and reduction measures are proposed, particularly within an AQMA. Similar policy support is provided for within the NPPF.

Provided any extraction at Moat Farm (where use of the adjoining Stonecastle Farm Quarry processing site and access to the Whetsted Road will be required) is not concurrent with extraction of any reserves at Stonecastle Farm, does not exceed the current level of permitted extraction-and trip rates are no greater than the existing planning permission at the Stonecastle Farm site, the highway impacts of the site would be acceptable.

The Council's assessment of the potential impacts on highways and transportation concludes that there are no highways grounds to prevent allocation of the site.

Landscape and Visual Amenity

The proposed site has been assessed against policy DM2 of the KMWLP which aims to ensure that there are no acceptable adverse impacts on important landscapes, including the High Weald AONB, and sets out the circumstances where impacts upon them would be acceptable. Policy DM2 notes that proposals outside, but within the setting of an AONB will be considered having regard to the effect on the purpose of conserving and enhancing the natural beauty of the AONB. This policy was prepared in line with the NPPF which sets out similar criteria. Impacts on visual amenity are assessed against policy DM11 that seeks to ensure that minerals development is unlikely to generate unacceptable adverse impacts from visual intrusion.

The High Weald AONB is located approximately 1.8km south of the site.

Assessment of landscape impacts concludes that given the nature of proposed activities at the site; excavation below existing ground levels, elements of plant that are relatively low in height, and the character of the AONB itself (extensive dense tree cover), there are expected to be few, if any, locations within the designation from which views of development at the site would be available. As changes at the site are unlikely to have any notable influence upon land within the AONB boundary, it can be reasonably concluded that the presence of minerals extraction operations at the site would not materially affect the statutory purposes and special qualities of the High Weald AONB. The High Weald AONB unit has not raised any concerns.

As proposals for the site are developed in greater detail at any planning application stage, mitigation measures intended to reduce or prevent adverse landscape and visual effects should be incorporated into the design of such proposals. Particular focus will have to be given to minimising adverse visual effects from the property at Moat Farm, and those properties to the south and east

where views into the Site are anticipated to be available.

Overall the County Council considers that subject to certain matters being satisfactorily addressed at the planning application stage, the site is acceptable in principle on landscape grounds.

Biodiversity

The proposed site has been assessed against policy DM3 of the KMWLP which requires that proposals do not result in unacceptable adverse impacts on Kent's important biodiversity assets and SSSIs. This policy was prepared in line with the NPPF which sets out similar criteria.

The site is bordered to the north-west by Ancient Woodland with further Ancient Woodland within 500m of the site to the south-west.

It is considered that the fields may be utilised by ground nesting birds/wintering birds and the site boundaries may contain suitable habitat for breeding birds, reptiles, and water voles. The site has some potential to impact habitats for protected/notable species, but it is limited, and appropriate mitigation can be implemented. Therefore, information assessing the ecological impact can be addressed as part of any planning application.

There would need to be an appropriately sized buffer between any extraction area and the Ancient Woodland. Again, this could be addressed within any planning application.

It is concluded that the area is of limited ecological value and any adverse impacts could be addressed during the normal planning application stage which considers mitigation measures. Stand offs to protect the Ancient Woodland to the north of the site would address the Environment Agency's concern for any incursion to the stream that bounds the northern area of the site.

Overall, the County Council does not consider there to be any biodiversity grounds to prevent allocation of the site.

Historic Environment

The proposed site has been assessed against policy DM5 of the KMWLP which requires that there should be no unacceptable adverse impact on Kent's historic environment taking account of mitigation and compensation and heritage assets be conserved in a manner appropriate to their significance. This policy was prepared in line with the NPPF which sets out similar criteria.

Moat Farm is a listed building and the setting and character of this heritage asset will require to be assessed to ensure the building and its setting are not significantly adversely affected. Given that there is an at least 170m separation between the nearest boundary of the site (not necessarily active workings) largely reduces the impacts that could be regarded as adverse to the integrity of the building. In the longer term, the wetland restoration will alter the character of the setting of the building. Provided landscaping of created lake margins are undertaken sensitively e.g. with native planting, this change is unlikely to be entirely incompatible with this heritage asset.

Historic England has been consulted on the proposal to allocate this site for mineral working and it has not raised any specific concerns.

The Council's Archaeological Officer considers that there is potential for Palaeolithic remains within the sediments that make up the sand and gravel deposit to be present. Normal planning permission conditional pre-commencement controls would be able to ensure that any such remains are investigated appropriately.

Need for the mineral

The proposed site has been assessed against policy CSM2 that sets out the requirements for the supply of sharp sand and gravel. This policy was prepared in line with NPPF.

The deposit in this location constitutes river terrace sand and gravels.

Calculations regarding supply and demand based on 2017 data, taken together with an 18-year landbank, suggest the shortfall is now in the order of 5.75mt for sharp sand and gravel¹². The yield from this site is estimated to be 1.5 million tonnes which would make a significant contribution to supply requirements.

British Geological Survey data indicates that terrace sands and gravel is an economic mineral. The actual economic viability of any one particular deposit largely depends on the local economy and specification for quarried materials supply. While the material may not currently have significant market demand, workings have occurred in the past in the locality and thus the economic viability of the deposit may improve, particularly as other land-won resources are increasingly depleted.

Green Belt

The proposed site has been assessed against policy DM4 of the KMWLP which states that development within the Green Belt will be considered in light of its potential impacts and shall comply with national policy and the NPPF policy on Green Belt.

The site is within the Metropolitan Green Belt. Subject to preserving openness of the Green Belt and not impacting on its purposes, mineral extraction is not considered to be inappropriate development, which is taken to include structures such as bunds, plant and machinery.

The proposed area of extraction is significant but due its location below ground level and remoteness from sensitive visual receptors there will be little, if any impact on the perception of openness. The arrangement with regards to plant and machinery are known, in that they will not be on the site and any screening bunds will not essentially be required. Restoration is proposed to open water.

As such, it is concluded in principle that, as the mineral extraction is not inappropriate development and such development in this location would preserve openness and not conflict with the purposes of including land within the Green Belt, allocation of this site would not conflict with policy on Green Belt.

Water Environment

The proposed site has been assessed against policy DM10 of the KMWLP which requires that development should result in no deterioration and improved ecological status of all waterbodies within the site and/or hydrologically connected to the site. This policy was prepared in line with the NPPF.

The use of wet working, that being the extraction of materials from below the water table level, negates the need to de-water the active quarried areas and thus there would be no increased turbidity (and suspension of sediment) in the abstraction water column that South East Water Limited have expressed concern over. Provided this method of extraction is secured at any planning application stage and a monitoring regime imposed by condition of that consent as agreed with SE Water and approved by the County Council there are no grounds to resist the allocation of the site. Such matters are normal to detailed planning application stages of mineral development.

¹² See Sharp Sand Topic Paper, 2018

Flood risk

The EA have stated that any proposals must be accompanied by a detailed Flood Risk Assessment which demonstrated the activities to be undertaken do not increase flood risk to the area, this must be approved by the EA. This is normal for mineral development at the planning application stage. The Strategic Flood Risk Assessment for the site shows that the majority of the site is located within Flood Zone 3 – an area considered to be at flood risk with a 1% (1 in 100) or greater annual probability of fluvial flooding. Land in the south-eastern extent of the site is located within Flood Zone 2 – an area considered to be at flood risk with between a 1% and 0.1% annual probability of flooding.

The area which is low lying within a flood plain is inherently susceptible to flooding. Mineral development, however is not a form of development that is highly sensitive to flooding (unlike residential development). Mineral extraction in a flood plain, when left as an open water body on restoration, is essentially neutral with regard to whether the activity increases flood risk.

Soil Quality

The proposed site has been assessed against policy DM1 of the KMWLP which requires that proposals demonstrate that there is no unacceptable adverse impact on the use of other land for other purposes possible. This policy was prepared in line with the NPPF.

Natural England's Agricultural Land Classification Map states that the site comprises grade 3b agricultural soil which is considered to be moderate soil which has limitations on the range of crops it can yield. Furthermore, due to the limited size of the site it is not considered that development in this location would lead to a significant loss of agricultural soils.

PROW

The proposed site has been assessed against policy DM14 of the KMWLP which requires that where proposals impact a PROW, they will only be permitted if; satisfactory prior provisions for diversion of the PROW can be made which are convenient and safe for the PROWs users, an acceptable alternative route can be provided during operations and restoration, and opportunities to improve countryside access are taken wherever possible. This policy was prepared in line with the NPPF which sets out similar criteria.

Footpaths WT159 and WT158 cross the western extent of the site, while footpath WT169 runs along the southern boundary of the site. It is considered that although, the two footpaths located on site would likely require extensive, and potentially permanent diversion (as the proposed site restoration is wetland habitat) this does not preclude the site form being allocated.

Cumulative Impact

The proposed site has been assessed against policy DM12 of the KMWLP which expects that mineral development should not result in an unacceptable adverse, cumulative impact on the environment or communities. This policy was prepared in line with the NPPF which sets out similar criteria.

It is recognised other proposed site allocations for mineral working are in the surrounding area. The KMWLP notes that cumulative impacts may occur where separate developments occur near to each other and there is a need for such impacts to be taken into account. The assessment of potential

impacts which could arise from development in this location has not revealed that unacceptable cumulative impacts would arise that could not be satisfactorily mitigated against, however cumulative impacts will require further consideration if a proposal were to come forward.

4.0 Conclusion - M10: Moat Farm, Five Oak Green, Capel

It is considered that the volume of sharp sand and gravel needed to meet KMWLP requirements can be supported by allocation of the M10 Moat Farm site. It is considered that adverse impacts associated with mineral development in this location can be addressed and satisfactorily mitigated through the normal planning application process, seeking further views of consultees and technical advice where appropriate.

Therefore, it is considered that the site should be allocated with a requirement that any application addresses development management policies, with particularly reference to the following considerations:

Transport

- A detailed transport assessment to demonstrate compliance with KMWLP policy DM13.
- Mineral must be removed from the site via the Stonecastle Farm site to the north such that access onto the highway network is achieved using the existing and approved access for the Stonecastle Farm Quarry.
- The site shall only be worked sequentially to the permitted phases at Stonecastle Farm Quarry or the Moat Farm Quarry (should planning permission be granted for this latter site).
- To avoid unacceptable impacts on the local highway network the M13 Stonecastle Farm Extension, the Moat Farm Site (M10) and the permitted Stonecastle Farm Quarry shall not be worked concurrently.
- Proposals for the diversion for PROW will be required which show how connectivity of the surrounding PROW network will not be lost.

Water Resources

- A 16 metre buffer should be provided between extraction and nearby watercourses to alleviate flood risk in the area. Furthermore, should the Alder Stream require diversion, this should be subject to EA approval and hydraulic modelling must be undertaken to inform the diversion route and the potential impact on flood risk elsewhere.
- Demonstration that the site will have no adverse impacts on hydrology or hydrogeology. This should be undertaken in liaison with South East Water and the Environment Agency
- Any restoration works should not include raising the ground levels over existing levels as this will have an adverse impact on flood risk. Wetland restoration is preferable.

Biodiversity

- Any proposal would need to be accompanied by a detailed ecological appraisal setting out any mitigation measures needed to ensure there are no unacceptable impacts on Kent's biodiversity assets
- Any operations should exclude the Ancient Woodland and a suitable buffer should be employed as to not impact on the designation directly or indirectly.

Health and Amenity

- Compliance with policy DM11 of the KMWLP in respect of health and amenity.

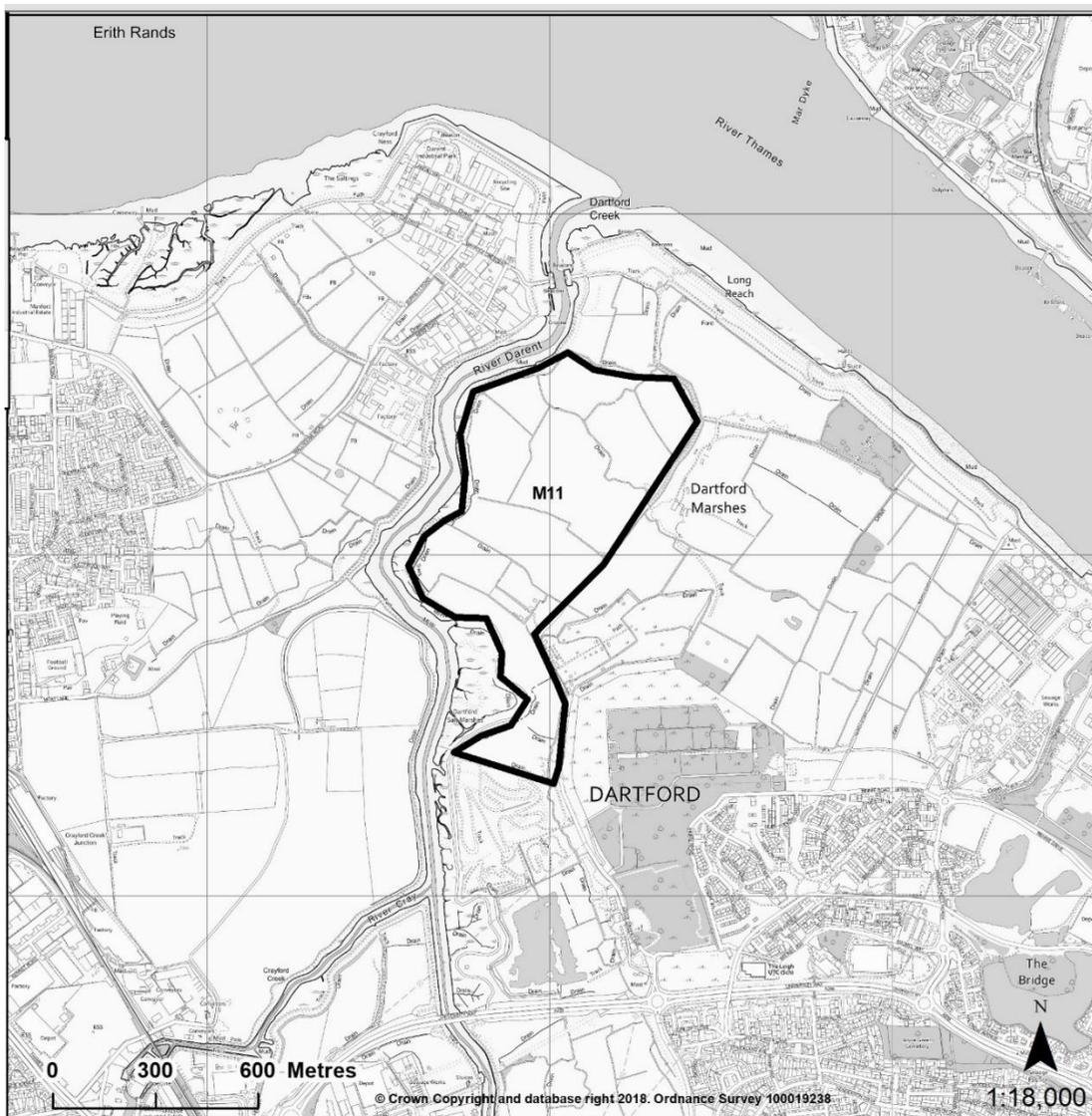
- A lighting, noise, dust, odour and vibration management plan should be completed, setting out how unacceptable impacts will be avoided. A detailed dust assessment and management plan should be submitted which follows best practice and any national Government guidance (e.g. Planning Practice Guidance).

Heritage

- There is potential for Palaeolithic remains within the site. Therefore, any planning application should be accompanied by a full archaeological impact assessment to ascertain the extent of such remains.

M11: Joyce Green Farm Quarry Extension, Dartford - Sharp Sand and Gravel

Site Location Plan



1.0 Matters addressed by Detailed Technical Assessment

Initial Assessment

The initial assessment of the site identified a number of matters which would require particular consideration, these were:

- Impact on landscape
- Impact on biodiversity
- Impact on the historic environment
- Impact on the water environment
- Impact on air quality
- Loss of grade 3 agricultural soil
- Impact on Public Rights of Way (PROWs) and their setting
- Impact on the highway network

- Impact on health and amenity
- Cumulative impact with other development in the area
- Site is within the Green Belt

Matters Raised during the Options Consultation

The matters raised during the public consultation on this site are summarised below.

Views of key organisations

A summary of the responses from key organisations, including statutory consultees, is set out below which sets out the nature and extent of the concerns of such consultees especially with regard to the matters listed above.

Environment Agency (EA) – Object /Raises concern/objection in respect of ecological impacts, groundwater, water resources and flood risk:

Ecology

Objection, without further information being presented as to how the impacts of this development can be adequately mitigated. The site contains significant lengths of ditches and provides an important range of habitats as part of the Local Wildlife Site (LWS).

The EA considers that in order for the site to be allocated, the site would require the re-creation of ditches in order to accommodate protected species and provide important habitats integral to the Local Wildlife Site designation. The EA considers that it is unclear how this can be achieved and that further information is required to demonstrate that this site is suitable for mineral extraction.

The EA disagrees with the initial site assessment (RAG) rating in respect of the sustainability assessment - while the objective to have no impact on important elements of biodiversity and where possible positively contribute to the Kent Biodiversity Action Plan (BAP) is good, it is not possible for this to be achieved (on the information available) within the boundary of the site. Therefore, the RAG screening and comments associated with it are not accurate. No information has been provided as to how mitigation can be delivered, thus the site should score as 'red' until this is provided and found satisfactory.

Groundwater

Sampling of the made ground should be carried out to prove that the ground is clear of leachable contamination, which may impact local water quality if the ponds increase outflows from underlying materials.

Pollution prevention measures that reflect best practice will be required to protect water resources.

Water Resources

The EA considers that the proposed excavation of mineral at Joyce Green Quarry poses a Low Water Resources risk. It is anticipated that appropriate mitigation measures, substantiated through a detailed programme of monitoring, will be necessary in order to prove beyond reasonable doubt that the quarry activities do not have a detrimental impact on the following aspects;

- how the Dartford Marshes will continue to function hydraulically, following the extraction of mineral, recognising that the creation of a lake will cause a significant change to the local hydrology, relative to the existing 'fabric' of drains and ditches that constitutes the Marsh; and

- Should dewatering be employed at Joyce Green Quarry there will be a need to demonstrate how brackish/ saline ingress will be managed, given the proximity to the River Darent's tidal reach during the operational phase.
- A licence should be sought from the EA should there be a proposal to dewater the site.

Flood Risk

No objection to the proposed M14 site on flood risk grounds, the proposed mineral site falls within the High Risk Flood Zone as shown on the Agency's Flood Map:

The site falls within Flood Zone 3 (FZ3) as described in Table 1, of the Technical Guidance to the National Planning Policy Framework. Local Authorities are guided to adopt a precautionary approach to the issue of flood risk, avoiding such risk where possible and managing it elsewhere.

Table 2, paragraph 066 of the Planning Practice Guidance acknowledges that sand and gravel deposits are 'water compatible' developments. This means they must be worked where they occur, and so likely to exist within a Flood Zone. However, they must still be worked in ways that do not increase flood risk. The proposals for minerals extraction that are situated in FZ3 must be accompanied by a detailed Flood Risk Assessment (FRA), which demonstrates the activities they intend to undertake do not increase flood risk to the site or surrounding area. This must be approved by the Environment Agency.

The Joyce Green Quarry site (Dartford) has flood defences either on or adjacent to the site. The EA require detailed information about the distance of the extraction from the flood defences and how any extraction could impact the integrity of the flood defence.

Highways England

Highways England will be concerned with proposals that have the potential to impact the safe and efficient operation of the SRN, in this case the M25 and in particular Junction 1a. The site is located approximately 2km from the junction.

From the available information, it seems the site would undoubtedly have an impact on M25 Junction 1a, an already congested junction

Highways England are in agreement with the County Council that vastly increased HGV movements associated with the transportation of inert restoration materials would be very unlikely to be acceptable and a Transport Assessment will be required at the time of the application demonstrating the vehicle movements associated with the extension of the site. Accordingly, the construction and operational impacts of the site on the SRN needs to be considered, both individually and cumulatively in order to for us to be satisfied that the proposals will not materially affect the safety, reliability and/or operation of the SRN (the tests set out in DfT C2/13 and DCLG NPPF para 32). If the impact of the proposals is detrimental to the safe and efficient operation of the SRN mitigation would be required to ensure that the impact upon the local road infrastructure is reasonable.

Additional details of potential traffic impact have been prepared by the promoter of the site; Highways England has not provided any further comment.

Natural England

The allocation is likely to:

- Result in a partial loss of Coastal and Floodplain Grazing Marsh priority habitat

- Have indirect impacts to the adjacent Coastal Saltmarsh priority habitat

Further assessment should be undertaken to assess the implications of the allocation on priority habitats/habitats of principle importance.

Dartford Borough Council

The site option is identified as 48ha of land at the west side of Dartford Marshes close to the River Darent. The land is salt marsh and is designated as a Local Wildlife Site which is noted in the assessment. However, its designation as Borough Open Space in the Dartford Development Policies Plan, 2017 (DP24) is not. The site lies in a Biodiversity Opportunity Area (DP25), where Dartford's Development Plan policies require particular focus to be given to enhancing biodiversity. Dartford's Core Strategy (CS3) requires that one of the key principles for development at the site is that the Marshes be protected and enhanced as a biodiversity asset and for low key leisure and recreation taking into account this ecological protection.

The site is located within the Green Belt. A Green Belt assessment will be required to fully assess the impact of the proposed allocation. This must assess the extent of potential visual and landscape harms including the historic importance of the landscape and ecology in this location. The site forms the remnants of the historic Thames grazing marshland of the Crayford and Dartford Marshes, spanning the Greater London Borough of Bexley and Dartford Borough. Regard should be given to the important purpose of the Green Belt at this location. It particularly serves to check the unrestricted sprawl of large built-up areas and prevents neighbouring towns merging into one another in keeping with NPPF para 80. The extent of Green Belt in the north of the Borough has previously been much reduced through urbanisation. The Crayford and Dartford Marshes provide the last limited area of separation between London and the North Kent Thames Estuary growth area and prevents their coalescence.

The contiguous nature of the marshes also provides important ecological corridors which should be considered and identified in assessment. Overall it is likely that mitigation of the harms brought about through mineral development will be challenging, impacting on the deliverability of the site.

Under current national policy, the use of land for mineral extraction is not necessarily 'inappropriate' in the Green Belt (NPPF, para 90). However, this is providing that the operation would preserve the openness of the Green Belt and that it does not conflict with its purpose. Dartford Council is strongly of the view that the location, flat landscape and extremely 'open' character (devoid of built development) of this site all indicate that its use would both severely impact on its openness and conflict with the purposes of Green Belt. In these circumstances, it is concluded that use of the land for mineral extraction would be 'inappropriate development'.

Additionally, the nature of potential development required for the mineral extraction operations should be taken into account in the assessment. It is noted in the KMWLP 2014 that '*Processing plant, commonly associated with mineral extraction, is unlikely to preserve openness, owing to its size, height and industrial appearance and therefore would be inappropriate development*'.

Further technical work must include a more refined assessment as to whether '*very special circumstances*' exist, in accordance with NPPF policy, so as to justify inappropriate development in the Green Belt. This should be undertaken in advance of KCC identifying a site as a preferred option for mineral extraction. In the event that '*very special circumstances*' cannot be justified, as Dartford Council contends is the case with this site, the proposal cannot be considered deliverable and should be screened out of the site selection process, due to unacceptable impacts.

Dartford Borough Council - (Environmental Health Officer) raises concerns with the proposed site access via Bob Dunn Way. This access is a heavily trafficked route where nitrogen dioxide pollution levels were recorded at being 46.9 µg/m³ in 2016 (compared to an objective level of 40 µg/m³). The proposed site would result in additional (Joyce Green Quarry would have up to 160 HGV movements) HGV movements per day through an area of poor air quality.

The route along Bob Dunn Way would provide access to the A282 (M25) at junction 1a. This junction is often subjected to congestion as a result of incidents occurring at the Dartford crossing and there is concern that drivers would choose to drive through Dartford Town Centre (through Air Quality Management Areas) to avoid this congestion. There is also concern that noise from the quarrying activities would cause disturbance to residents in Temple Hill.

CPRE – expresses concerns about allocating the site. It is considered that that the Sustainability Appraisal (SA) does not give due consideration to the following and consider that their absence undermines the Summary of Stage 2 RAG Assessment and that this will need to be reassessed in the light of these concerns:

- The site forms part of a Local Wildlife Site (LSW), Biodiversity Opportunity Area and Nature Improvement Area (Dartford Development Policies Plan Figure 7: Indication of Green Space and Links identifies the site as a *'Designated nature conservation and open space area'*). These designations are subject to adopted *Dartford Development Policy DP25: Nature Conservation and Enhancement* which resists development. Developments will be expected to preserve and, wherever possible, enhance existing habitats and ecological quality, including those of water bodies, particularly where located in Biodiversity Opportunity Areas. These designations have been omitted from the SA Scoping Report.
- The SA omits reference to and assessment of the Darent Valley Footpath which runs along the western side of the site on the flood protection banks. The path follows the whole of the western boundary of the site and extraction will, in our view, adversely impact on views from the path changing the view from looking over grazing marsh to open water
- The site was incorrectly assessed as not being in the Green Belt.
- Dartford Marshes are important for Winter bird migration. The Managing the Marshes Vision & Strategy March 2006 states that Dartford Marshes *'act as high tide refuges for birds feeding on adjacent mudflats, as breeding sites for waders, gulls and terns and as a source of food for passerine birds particularly in autumn and winter. In winter, grazed salt marshes are used as feeding grounds by large flocks of wild ducks and geese'*. The SA needs to give due consideration to the impact of gravel extraction on the needs of wintering birds.
- The assessment of soil quality for the site has an Amber RAG Outcome. It is identified as Grade 3 and *"The soil is likely to be impacted by activities at the site, restoration opportunities exist although it is proposed to restore the site to wetland habitat.'* In contrast the assessment of soil quality for Site M10 Moat Farm, again Grade 3, has an Amber-Red RAG Outcome as *"... The proposed restoration is to wetland habitat and therefore the agricultural land would be lost. Opportunities for mitigation / restoration to agricultural land exist.'* Given that it is the intention that the proposed restoration for both sites is to wetland habitat even though restoration opportunities exist site M11 should have the same RAG Outcome, namely Amber-Red.

There are no details of buildings and processing plant that would be required to serve the site. The site lies within the Green Belt and whilst mineral extraction activity is not considered to be inappropriate development associated activities such as processing and restoration may affect *'openness'* and if proposed would need to demonstrate the existence of *'very special circumstances'* as set out in Green Belt policy. It would be helpful to greater understanding of what buildings would be required and where they would be located to help address this matter to enable a fuller SA.

Table 22 of the adopted Minerals and Waste Local Plan states that the site was owned by Hanson (Joyce Green Aggregates) and that whilst it had permission it was inactive at 2015. Some aggregate had been extracted prior to extraction ceasing. The Options consultation indicates that the site is now owned by Ingrebourne Valley Ltd. This indicates that there is uncertainty over the deliverability of the site given the previous owner having ceased operations.

Kent Wildlife Trust –The trust objects to the Option site given that the potential allocation of this site would overlap with a large area of Local Wildlife Site DA04 “Dartford Marshes”. This is a site of County importance for nature conservation and represents direct loss of a large portion of a locally-designated site, which cannot be mitigated for. Kent Wildlife Trust strongly objects to this (potential) allocation and it is not in conformity with current national planning guidance, as presented in the National Planning Policy Framework (NPPF).

RSPB - Allocation of the site will result in direct loss of local wildlife sites and therefore RSPB are supportive of the Kent Wildlife Trust’s representations on this matter.

KCC Advisors

In undertaking this detailed assessment, advice has been sought from a range of technical specialists who advise the County Council on planning matters. This includes advice from on biodiversity, Public Rights of Way, noise, air quality, landscape, heritage, water resources, stability and highway and transportation interests. The views received have informed the assessment and the discussion section below. Several related standalone specialist reports have been prepared and have been published as background documents. The work has also been informed by the Project’s Sustainability Appraisal work.

Views of Elected Representatives

KCC Member – David Butler

Advises that he “raise issues regarding the consultation and any plans to move this forward, and strongly voice my concerns in any form on these sites being used for this purpose.

Dartford North East has the highest traffic volume in the County and is in gridlock on most days due to the Dartford Crossing; for this reason alone it should not be considered a suitable site.

The Joyce Green Lane site backs on to a sports pitch currently under construction and in very close proximity to a housing development. This site off Central Road has recently had a national TNT depot built and I already receive complaints regarding noise, pollution and overall objections.

Dartford North East has had huge construction activity over the last 5 years and will continue to for the year ahead, this will add more noise and more traffic to an already overloaded network, and a further deterioration to local air quality and overall quality of life for residents in Dartford North East and the wider Dartford.

I urge you to take this into careful consideration.

Dartford Borough Council - (Leader Mr Jeremy Kite MBE)

Strongly objects to the potential allocation. There is significant local concern at the intensity of development taking place in the Borough at this time. This is leading to the residents of Dartford experiencing adverse impacts on amenity and quality of life.

The sites identified in the Minerals Sites Plan Options consultation are part of the designated Green Belt and green space in the Dartford Local Plan. The site is closely related to large development sites which are well advanced, which provide much needed relief for the residents in an area of great change and intense development pressure. The existing Joyce Green Quarry is immediately adjacent to the large mixed-use development at The Bridge and the extension area (the M14 option site) is part of the limited remaining undeveloped land which is all that separates Greater London with the North Kent growth area and prevents the convergence of the two.

The open space needs of the local community appear not to have been taken into account, the potential loss of the open space and extraction activity in close proximity of the residential area is inherently unacceptable to the amenity protection of these residents and the wider community of the Borough. Inevitable dust and noise from the extraction would be compounded by pollution from the HGV's transporting materials from the site, in an area which already suffers from heavy congestion and Air Quality Management Area (AQMA) pollution level exceedances.

It is understood that mineral extraction has to take place to meet needs of society, however questions whether it is right that it is proposed within the densest and fastest growing part of Kent, where transport and development pressures are reaching capacity.

It is considered unacceptable that the small district of Dartford should have to be responsible for providing 25% of the required aggregates supply for the county whilst making an extensive contribution to housing delivery. It is not possible for the area to meet these competing and intensely impacting forms of development. The Mineral Sites Plan is being prepared in an uncoordinated manner with regard to the wider planning of the area given current National Planning Policy, however the Mineral Sites Plan cannot be prepared in a vacuum and the wider planning issues must be taken into account in preparing this Plan.

Representations made by members of the public

Concerns raised by local residents during the options consultation included:

- Impact on local amenity and health by way of noise, dust and vibrations
- Impact on flora and fauna
- Marshland is an important habitat
- Impact on landscape and visual amenity
- Impact on archaeology
- Cumulative impact with other major developments in the area
- Industrialisation is contrary to the regeneration of Dartford
- Encroachment of nearby industry
- Lack of restoration of other quarries in the area is blighting the locality
- Highway infrastructure inadequate and impact on road safety
- Site needs to be restored to a high standard
- Contamination of water resources
- Impact on PROWs
- Impact on flood risk
- Will deplete local water resources
- River should be utilised to transport materials
- Impact on property values

2.0 Sustainability Appraisal

In accordance with statutory requirements a sustainability appraisal (SA) has been completed which considers how well the site performs against certain sustainability objectives. The detailed results of the SA are set out in a separate document.

3.0 Discussion

This section addresses matters raised above as well as those identified during the initial site assessment which are key to assessing the suitability of the site for allocation in the Kent Minerals Sites Plan.

Amenity

The promoted site has been assessed against policy DM11 of the KMWLP which requires that mineral development should not generate unacceptable impacts from noise, dust, vibration, odour, emissions, illumination, visual intrusion, traffic or exposure to health risks and associated damage to the qualities of life and wellbeing to communities and the environment. Similar policy protection is provided within the NPPF.

The site lies to the east of the River Darent, with the permitted Joyce Green Farm Quarry operating to the south of the site. The Bridge housing development lies to the south east, at some 300m distance from the permitted Joyce Green Quarry and approximately 450m from the promoted M14 site. The intention is for the processing area to remain on the permitted site. To the west, the closest dwellings are within Slade Green, Bexley at approximately 650m distance from the proposed operational areas and some 1500m from the processing area.

Given the separation of the site from the main residential areas of Dartford and Bexley, extraction and restoration operations at the site would not result in significant adverse impacts of noise or vibration to residential amenity. As extraction would be from marshland the sharp sand/gravel is likely to be wet which would aid dust suppression. Extraction activity could however be constrained by residential receptors to the south east and the AQMAs across the Borough. Normal quarry operation environmental controls would likely be sufficient to contain noise and dust emissions to the wider area and the need for and efficacy of any mitigation could be considered at planning application stage. There is however, concern that the increased HGV traffic on the locality will introduce unacceptable amenity impacts, namely increased traffic congestion and air quality impacts arising from the mineral activity which could create both amenity and health effects.

This potential disturbance to amenity was raised by Dartford BC's Environmental Health Officer (EHO) and the Council's advisors. The Borough Council's EHO draws attention to the impacts on air quality, particularly if the vehicles were to choose to travel through the AQMA to avoid the congestion along Bob Dunn Way. Bob Dunn Way is a heavily trafficked route where nitrogen dioxide pollution levels were recorded at being 46.9 µg/m³ in 2016 (compared to an objective level of 40 µg/m³). The route along Bob Dunn Way provides access to the A282 (M25) at junction 1a. This junction is often subjected to congestion as a result of incidents occurring at the Dartford crossing. There is concern that HGV drivers would choose to drive through Dartford Town Centre (through the AQMA) to avoid this congestion. As a result, the proposed site would result in an additional 160 daily HGV movements through an area of poor air quality. In addition, the promoted site lies in close proximity

to the County boundary with the London Borough of Bexley lying to the west. It is noted that the entire London Borough is designated an Air Quality Management Area and that traffic leaving the site and travelling westwards into Bexley would pass through the Bexley AQMA.

Traffic congestion in the locality often leads to a considerable number of HGV vehicles idling on local roads and in the absence of overriding evidence, the impact upon air quality in this location may not be capable of being adequately addressed.

In respect of impact upon open space, the promoted site forms part of the open space requirements for strategic development that has taken place in the area. Its long-term protection from development is a significant part of the Borough's adopted local plan amenity provisions. The site lies within a Biodiversity Opportunity Area where the focus is given to enhancing biodiversity. Core planning objectives seek to protect and enhance the marshland as a biodiversity asset. Further consideration is given to the implications for biodiversity below, but it is recognised that the site also has an amenity role as open space. This is particularly important as the population and development pressures increase in this part of the county.

Whilst the intention would be to restore the site and recreate the existing ditch habitat, there would be a period of some 10 years of mineral extraction, where the appearance of the landscape would be visually changed. Views of the development would be visible from public vantage points, including the Darent Valley footpath, that runs along the western side of the site. With careful design, which would need to be tested at planning application stage, views of the development are likely to be capable of mitigation, but at the expense of openness.

In conclusion, whilst the promoted site is essentially remote from immediate local residential areas, the associated HGV traffic would result in unacceptable amenity impacts on the locality, an area where there is significant development pressure. Additional HGV traffic would add to this, despite being modest in growth terms; further loading of the local highway network is unlikely to be mitigated. There is also the consideration that the site affords to the wider community an area of relative tranquility accessible by nearby public footpaths. This type of local amenity resource is limited in the Borough and would be disrupted (though not entirely lost) for the life of the development.

The promoted site would give rise to unacceptable impact on air quality and the 'general quality of life' due to increased traffic congestion on Bob Dunn Way. The site would also result in the temporary loss of the open space that is part of the last undeveloped riverside areas of the Borough.

Highways and Transportation

The proposed site has been assessed against policy DM13 of the KMWLP which requires that mineral development satisfy that the access arrangements are not detrimental to road safety, that the highway network is able to accommodate the traffic flows and will not give rise to unacceptable impact on the environment or local community and that emission control and reduction measures are proposed, particularly within an AQMA. Similar policy support is provided for within the NPPF.

The Local Highway Authority (KCC) has considered the capacity of the local roads to accommodate further HGV movements without adverse and unacceptable impact on the local highway network (with particular regard to Bob Dunn Way (A206) and its junction 1A (interchange onto the A282 Dartford Crossing approach). The excavation and restoration activity is anticipated to

be in the order of 116-174 two-way HGV movements per day for the mineral extraction as well as for the revised restoration proposal, which now involves the importation of restoration materials.

The work concluded that the site would result in unacceptable highway impacts in the immediate locality and in particular at junction 1a with the close proximity of the SRN (M25). The Local Highway Authority has stated :

“The potential of the site to exacerbate traffic congestion around the M25/A282 junction 1A is of concern to the County Council. This location is one of the most strategically important yet least resilient parts of the national road network. It is considered by the County Council that even modest traffic increase will have potentially sizeable impacts on traffic conditions, particularly when viewed cumulatively with the other planned development as identified by the Dartford Local Plan for the area. It is the case that the Dartford crossing has been either partially or completely closed, for an average of 300 times per year (for 30 minutes or more). This can cause between 3 to 5 hours for roads to clear following a closure. This can cause blocking back on the northbound approach to the river crossing directly affecting the operation of Junction 1a. Vehicles waiting to travel northbound on the M25/A282 typically queue beyond the end of the slip road and through the western roundabout of Junction 1a. Traffic congestion on the local road network is often a direct consequence of traffic seeking alternative routes to avoid incidents and queuing on the M25/A282 mainline.”

On this basis, the Local Highway Authority raises objection to the promoted site. This conclusion has been reached with knowledge of the promotor’s efforts to demonstrate that the proposals would result in an increase of just 6 HGV trips (12 movements) above current levels in the peak periods and that the site’s main market would be substantively westwards, towards Greater London, and away from junction 1A on the A206/A282 interchange.

Highway England shares the concern about the resilience of the strategic network in this location and considers that the site would have an impact on M25 Junction 1a, an already congested junction. HGV movements associated with transportation of inert restoration materials would likely impact on this junction. Without further detailed transport evidence setting out the transport implications of the mineral development, and demonstrating that the vehicle movements associated with the extension of the site will not materially affect the safety, reliability and/or operation of the SRN it is not possible to conclude that the impacts associated with the transport of materials related to this development would be acceptable in principle. It is noted that additional details of potential traffic impact have been prepared by the promoter of the site and that Highways England has not provided any further comment.

The promotor had examined the potential use of the River Thames and River Darent for the import and export of material. Lack of commercial navigation of the lower River Darent and the existence of substantial river defences along the River Thames makes any such proposal impracticable.

In conclusion, the site is unacceptable for mineral development given the adverse impact on highway network.

Biodiversity

The proposed site has been assessed against policy DM3 of the KMWLP which requires that proposals do not result in unacceptable adverse impacts on Kent’s important biodiversity assets. This policy was prepared in line with the NPPF which sets out similar criteria.

The site is grazing marsh, a priority habitat and a habitat of principal importance under the Natural Environment and Rural Communities Act. The site contains two priority habitats: coastal floodplain

and grazing marsh; and hedgerows . It is noted that the grassland has an affinity with other grassland priority habitats. The promoted site is also identified as a Local wildlife Site – Dartford Marshes, a Biodiversity Opportunity Area (BOA) and Nature Improvement Area, and forms part of Green Corridor No 12 of Bexley's 14 Designated Strategic Green Corridors River Darent corridor.

It has a number of drainage ditches bisecting the grazing (salt marsh) areas. The drainage ditches have important flora and fauna (including water vole, a Red Book conservation status species). The open grazing areas are also notable in that they *'act as high tide refuges for birds feeding on adjacent mudflats, as breeding sites for waders, gulls and terns and as a source of food for passerine birds particularly in autumn and winter. In winter, grazed salt marshes are used as feeding grounds by large flocks of wild ducks and geese'*. Mineral extraction would have the following impacts on priority habitat:

- partial loss of Coastal and Floodplain Grazing Marsh priority habitat
- indirect impacts to the adjacent Coastal Saltmarsh priority habitat
- indirect impacts to the adjacent Deciduous Woodland priority habitat

All of these biodiversity assets are likely to be significantly negatively affected by the proposed operations and habitats will be lost.

Planning policies require a particular focus on enhancing biodiversity. The original intention was to restore the site to water bodies with wetland edges to provide additional biodiversity and recreational use of part of the site. In response to the detailed technical assessment work, the promotor's of the site have amended its proposal to enable restoration of the site to recover the ecological value of the land. This is proposed to be done with importation of inert materials to allow for re-creation of the grazing saltmarsh as bisected with the drainage ditch array currently present on the site. This, in principle, would be an acceptable way to mitigate losses of important habitat, though there appears to be less overall restored ditch length proposed that currently exists. Species/populations could be significantly affected during this loss and the re-creation of habitat process. Any biodiversity gain is unlikely to be a significant benefit for species affected by the temporary habitat losses and overall disturbance potential prior to eventual restoration. Moreover, the inherent complexities of a programme of ditch restoration and grassing saltmarsh using imported materials of different drainage (hydrological) characteristics, in association with maintaining the flora and fauna diversity currently present are such that deliverability of the restoration is questioned.

Landscape

The proposed site has been assessed against policy DM2 of the KMWLP which aims to ensure that there are no acceptable adverse impacts on important landscapes. This policy was prepared in line with the NPPF which sets out similar criteria. Impacts on visual amenity are assessed against policy DM11 that seeks to ensure that minerals development is unlikely to generate unacceptable adverse impacts from visual intrusion.

The amended proposals to change the final restoration objective from grazing marsh and open lake are to grazing marsh with reinstatement of the pattern and form of the drainage ditches is advantageous in landscape impact terms. It would effectively recover the landscape visually in terms of its character. However, the landscape would experience a temporary degree of disruption during the extraction and restoration phases. The intention to work the site effectively as a later phase to the permitted quarry working to the south, would negate the need for additional plant and processing facilities, thereby reducing the visual impact of the development and urban features in the landscape.

The development of the site would have a significant impact on the priority habitat inventory and local wildlife site designation. Any habitat creation through restoration and careful choice of planting and landscape design would enable the adverse effects caused by the extraction activities to be mitigated.

Whilst, in the longer term, mineral extraction would enable the land to remain open and free of built development, the landscape would be altered throughout the construction and restoration phases, thereby reducing the local value that the local plan strategy has identified.

Historic Environment

The proposed site has been assessed against policy DM5 of the KMWLP which requires that there should be no unacceptable adverse impact on Kent's historic environment taking account of mitigation and compensation and heritage assets be conserved in a manner appropriate to their significance. This policy was prepared in line with the NPPF which sets out similar criteria.

Historic England has been consulted on the proposal to allocate this site for mineral working and it has not raised any specific concerns.

There are no historic buildings or structures that would be directly affected by the proposed development of the site. No impacts are likely to listed buildings. The nearest listed building is a coal marker at approximately 480m. However, the Council's Archaeological Officer considers that there is a lack of site survey evidence to establish the presence of any Palaeolithic and Holocene archaeology at the site. Desk top evidence has been submitted, but further assessment is necessary to inform whether the site is suitable for mineral development and the acceptability of mitigation.

Water Environment

The proposed site has been assessed against policy DM10 of the KMWLP which requires that development should result in no deterioration and improved ecological status of all waterbodies within the site and/or hydrologically connected to the site. This policy was prepared in line with the NPPF.

The site is within Flood Zone 3 (1% or 1 in 100 annual probability of flooding). The Environment Agency made no adverse comments regarding flood risk, acknowledging that sand and gravel extraction represents a "water compatible" development and would not increase the overall flood risk characteristics of the site and the wider area. Further information, detailing how the proposal could impact the integrity of nearby flood defences would be required should the site be allocated.

The site is defended against flood risk, and the proposed mineral extraction operations would not compromise these works given that they are outside the area of mineral extraction and adequate standoffs would be normal to mineral operations such a location . Groundwater would require to be considered against the intended restoration proposals of using inert materials to regain the land levels and re-create the drainage ditch pattern across the site. This would have to be subject to exacting environmental controls as exercised by the Environment Agency's permitting regime under the relevant provision of the Environmental Protection Act 1990. Groundwaters would be protected from pollution by these legislative provisions.

The County Council concludes that the information requested to establish the impact on the water environment is a matter that could be addressed at planning application stage. In principle, there is no overriding water resource interest that renders the site unsuitable for allocation.

Land Stability

The proposed site has been assessed against policy DM18 of the KMWLP which expects that planning permission for development will not be granted unless it is demonstrated that development will not result in land instability. This policy was prepared in line with the NPPF.

The promoted site is low-lying, and the mineral resource is a superficial Sub-Alluvial River terrace deposit (Taplow Formation) that can be up to 4-5m in depth. The material is proposed to be progressively backfilled with inert restoration materials. The operation would not entail any significant risk to land stability. The adjacent flood defences would require a sufficient standoff to ensure that their geotechnical stability requirements are maintained, this is would be normal operational mineral development procedure.

PROW

The proposed site has been assessed against policy DM14 of the KMWLP which requires that where proposals impact a PROW, they will only be permitted if; satisfactory prior provisions for diversion of the PROW can be made which are convenient and safe for the PROWs users, an acceptable alternative route can be provided during operations and restoration, and opportunities to improve countryside access are taken wherever possible. This policy was prepared in line with the NPPF which sets out similar criteria.

Footpaths run along the site boundary to the west, east and southwest of the site, including the Darent Valley Path, the London Loop and the Thames Path, promoted as recreational paths. The Darent Valley Footpath runs along the top of the flood embankment to the west of the site. Users of these paths will see the site across the large open landscape. Screening will be provided but the site will still be visible from the path on the embankment, although the proposed development will not divert the paths. Users of roads in the vicinity may have glimpsed or distant views of the site and residents in Oaks Road to the west may see the site from upper windows.

Mitigation should be provided in the form of retained and enhanced vegetation and bunds which will minimise most impacts, although not for users of the path along the raised earth banks which could potentially be significant and adverse impacts for those users. Proposed mitigation measures and their effectiveness are a matter that can be considered at planning application stage.

Footpath DB1 and bridleway DB2 (to the west and east of the site essentially being coincident with but not on the promoted site boundaries) would not be directly affected by the proposals. However, they may require a degree of maintenance (to facilitate use of the paths adjacent to mineral workings).

KCC PROW officers have made no adverse comments on the proposal, and as such the County Council concludes that the impact on PROW's does not constitute a reason for not allocating the site.

Soil Quality

The proposed site has been assessed against policy DM1 of the KMWLP which requires that proposals demonstrate that there is no unacceptable adverse impact on the use of other land for other purposes possible. This policy was prepared in line with the NPPF.

Natural England's Agricultural Land Classification Map states that the site comprise grade 3 agricultural soil. The site is however in use as marshland and as considered above has an important open space function to support urban growth within the Dartford area. It is unlikely to be used for agricultural purposes given its biodiversity interest above.

The County Council concludes that the impact on soil quality does not constitute a reason for not allocating the site

Cumulative Impact

The proposed site has been assessed against policy DM12 of the KMWLP which expects that mineral development should not result in an unacceptable adverse, cumulative impact on the environment or communities. This policy was prepared in line with the NPPF which sets out similar criteria.

It is recognised that mineral working has taken place in the surrounding area of the Darent Valley in the past, with particular regard to the ongoing quarrying operation at Joyce Green Quarry, immediately to the south of the promoted site. The KMWLP notes that cumulative impacts may occur where separate developments occur near to each other and there is a need for such impacts to be taken into account. In this instance, the assessment of potential cumulative impacts which could arise from development in this location relate to the impacts from HGV movements and the consequential impact on air quality. From the evidence available these would give rise to unacceptable cumulative impact.

Need for the Mineral

The proposed site has been assessed against policy CSM2 that sets out the requirements for the supply of sharp sand and gravel. This policy was prepared in line with NPPF.

Calculations regarding supply and demand based on 2017 data, taken together with an 18-year landbank, suggest the shortfall is now in the order of 5.75mt for sharp sand and gravel¹³. The yield from this site is estimated to be 1.5m tonnes which would make a significant contribution to supply requirements.

The British Geological Survey states that the geology of the site is as follows:

“River terrace deposits of the middle and lower Thames contain gravel clasts mainly composed of flint, vein quartz and local bedrock lithologies including chert. Modern British Geological Survey maps also show the terrace deposits as named units which are here interpreted as members of the Maidenhead Formation. The main terrace deposit members are the Black Park Gravel, Boyn Hill Gravel, Lynch Hill Gravel, Hackney Gravel, Taplow Gravel, Kempton Park Gravel, Shepperton Gravel and Staines Alluvium. Brickearth silt beds include the Enfield Silt, Roding Silt, Langley Silt, Dartford Silt, Crayford Silt and Ilford Silt.”

The deposit of the site is part of the lower Thames Taplow Formation. A main terrace of flint gravel that represents a relatively thick layer of predominantly 'flint' sands and gravels that are considered as being of high quality for such applications as structural concrete manufacture.

Whilst it is recognised that there is a need to allocate the site on national planning policy grounds in

¹³ See Sharp Sand Topic Paper

respect of mineral need, the adopted KMWLP Policy CSM2 makes it clear that the requirement will be planned for “... *while resources allow*”. It therefore follows, that if the site is unacceptable in principle and cannot be allocated, the adopted policy recognises that demand will be met from other sources. These are principally a combination of recycled and secondary aggregates, landings of MDA (marine dredged aggregate), blended materials and imports of crushed rock through wharves and railheads. The actual proportions will be decided by the market.

Green Belt

The proposed site has been assessed against policy DM4 of the KMWLP which states that development within the Green Belt will be considered in light of its potential impacts and shall comply with national policy and the NPPF policy on Green Belt.

The site is within the Metropolitan Green Belt. Whilst mineral extraction does not inherently constitute ‘*inappropriate development*’ within the Green Belt (see NPPF Section 146), the proposal has to be considered in terms of whether it would preserve openness of the Green Belt and does not conflict with its purposes. This requires consideration of mineral extraction and restoration elements as well as the need for plant/processing equipment, infilling of land with waste materials (including inert materials) and screening measures (such as bunds and fencing). As these activities can have an impact on the ‘openness’ of the Green Belt, and/or cause ‘harm’ to the Green Belt (see section 146 of the NPPF).

The proposals would not involve the need to establish new plant to process the extracted materials given that the existing permitted plant site to the south of the proposed site would naturally be utilised for the processing of the materials (washing, grading and stockpiling of the flint sands and gravels). Nor would there be a need for substantive site screening bund structures given that the extraction site is remote to immediate local residential receptors. The proposed area of extraction is significant but, again, due its location below ground level and remoteness from sensitive visual receptors there will be little, if any, impact on the perception of openness.

Therefore, it is considered that the development of the site for mineral extraction would not have a detrimental impact on the need to preserve the openness of the Green Belt.

With regard to the restoration operations, it is clear in the NPPF that this element of the proposal is not identified amongst the list [a) to f) Section 146] of forms of development that are not inappropriate in the Green Belt. Therefore infilling the land to re-establish the ecologically valuable habitats, that would be otherwise threatened with loss, is not regarded as ‘appropriate’ development by the NPPF. In light of this it is necessary to consider whether ‘*very special circumstances*’ (see section 144 of the NPPF) exist.

Very special circumstances have to be advanced that demonstrate how the need for the proposal (infilling) can outweigh the ‘*inappropriateness*’ of what is being proposed by virtue of ‘*harm*’ to the Green Belt and any other harm that would result. It is considered that infilling the site and the ‘*harm*’ to the Green Belt and any other harm (that can be attributed to such impacts as disturbance, transport impacts and impact to the amenity of the area) are not outweighed by the need for the infilling.

Therefore, the re-establishment of habitat that would result from the infilling is not considered to outweigh the ‘harm’ it would inevitably incur over the life of the development. Very special circumstances in this regard have therefore not been demonstrated and the allocation of this site would not be in accordance with the NPPF (see section 13 Protecting Green Belt land) and Policy DM 4 Green Belt of the Kent Minerals and Waste Local Plan 2013-30.

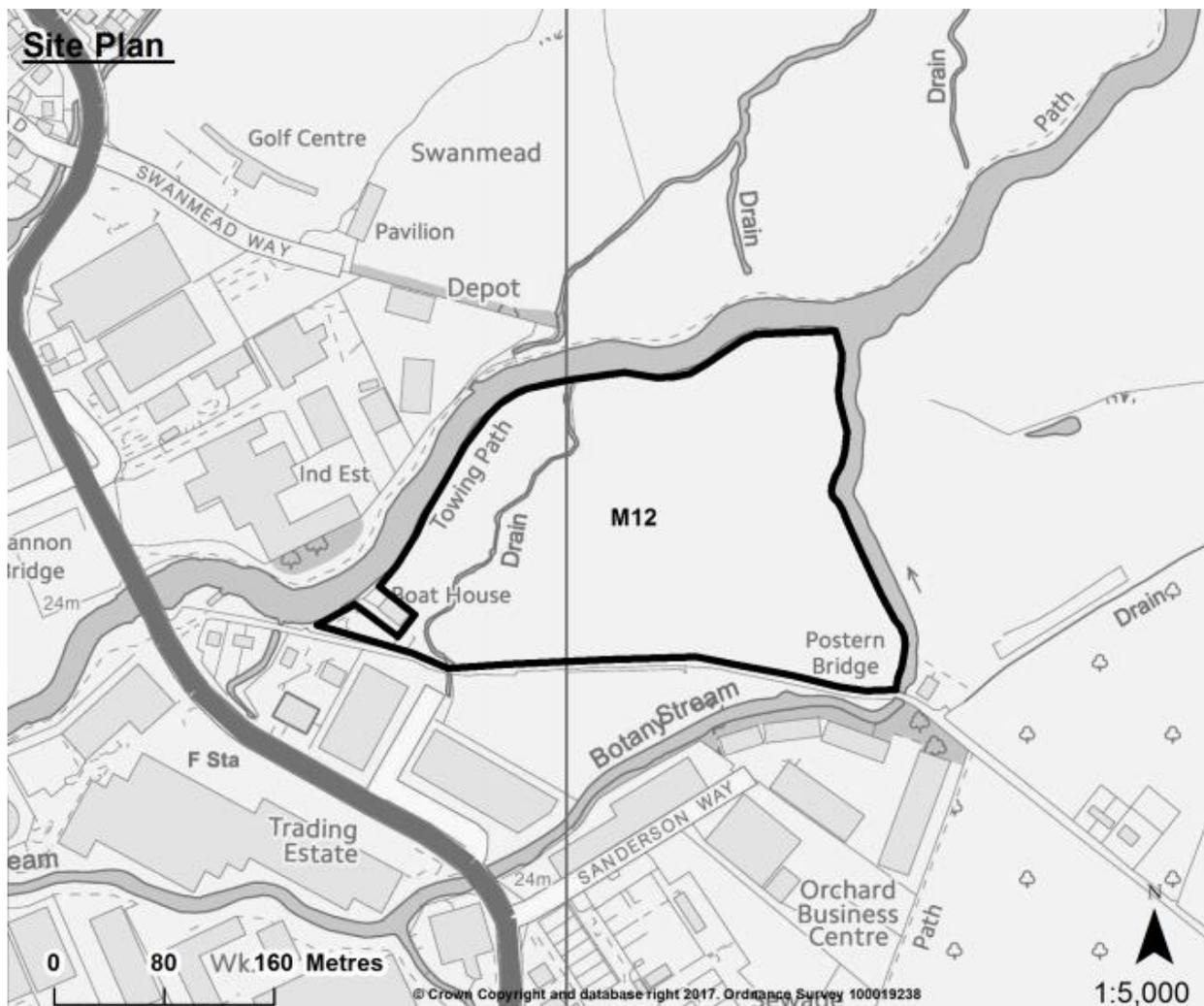
4.0 Conclusion - M11: Joyce Green Farm Quarry Extension, Dartford

In conclusion, whilst some matters are capable of being addressed in detail at the planning application stage, the County Council considers that the M11 Joyce Green site gives rise to unacceptable impacts on a number of key matters. In particular, these relate to highway impacts on Bob Dunn Way (A206) and the M25 Junction 1a (Dartford Crossing), loss of biodiversity habitat, impact upon Local Wildlife Sites (LWS) and UK Biodiversity Action Plan (BAP) interests, the appropriateness of the restoration proposals, impacts on air quality impact and the AQMAs and conflict with Local Plan open space objectives. The proposal is also considered contrary to Green Belt policy, being inappropriate development for which no very special circumstances have been demonstrated.

The County Council is therefore unable to conclude that the site is acceptable for allocation. The site is not identified as a site in the Pre-Submission draft of the Mineral Sites Plan.

M12: Postern Meadows, Tonbridge - Sharp Sand and Gravels

Site Location Plan



1.0 Matters addressed by Detailed Technical Assessment

Matters Identified by the Initial Site Assessment

As set out in section 3 of this report, the initial assessment of the site identified a number of matters which would require particular consideration, these were:

- Impact on landscape
- Impact on biodiversity
- Impact on the historic environment
- Impact on the water environment
- Loss of grade 3 agricultural soil
- Impact on Public Rights of Way (PROWs) and their setting
- Impact on the highway network
- Impact on health and amenity

- Cumulative impact with other development in the area such as the industrial estate to the south
- Site is within the Green Belt

Matters Raised during the Options Consultation

The matters raised during the public consultation on this site are summarised below.

Views of key organisations

A summary of the responses from key organisations, including statutory consultees, is set out below which sets out the nature and extent of the concerns of such consultees especially with regard to the matters listed above.

Environment Agency (EA) – Object due to the lack of information on how ecology of the River Medway and Botany stream will be impacted. As a minimum, measures must be taken during operation to ensure that the water quality is not affected in such a way to impact the Sewer. The implementation of a water quality monitoring programme may be appropriate.

The site overlies a gravel aquifer and is near to an SPZ3. The business park to the south is also underlain by a historic landfill. Appropriate risk assessments would need to be carried out to ascertain that any possible changes in water flow caused by quarrying would not cause impacts on controlled waters from the change in flow paths and changes to leaching from the fill materials. Relevant constraints would be imposed on a specific application for restrictions on depth of excavations, pollution control methods and ways of working to safeguard against aquifer disturbance or impacts on water quality.

So long as the final restoration plan recognises the need to ensure that the Botany Stream's function is retained, the proposal poses no immediate risk to Water Resources. Furthermore, the following uncertainties will need to be addressed, substantiated through a detailed programme of monitoring where necessary:

- In due course, it will be required to confirm the design of the restoration plan and in particular with reference to the landscapes interface with the adjoining river Medway. The site is underlain by Weald Clay Formation and there is some uncertainty as to how sustainable this restoration plan is independently from the River Medway so as to effectively augment levels. In principal we are against proposals that would result in further unconstrained demand being placed on the River Medway's flow, and especially during those scenarios when the regime would be stressed and incapable of supporting what would amount to an additional abstraction.
- A small part of the site is potentially underlain with Tunbridge Wells Sand Formation and as a consequence the extent of the outcrop and the relative position of the geological boundary with the Weald Clay Formation will need to be proven site investigation. Furthermore, it will need to be demonstrated that removing the alluvium will not pose a risk to the underlying Tunbridge Wells Sand Formation, which is a principal aquifer unit.

Furthermore, it should be noted that as of the 1st January 2018, in accordance with the Water Act 2003, dewatering is a regulated activity. A licence should be sought from the Environment agency should there be a requirement to dewater the site.

Natural England – The proposed allocation is in close proximity to the High Weald Area of Outstanding Natural Beauty (AONB) and the proposal should be assessed carefully to determine whether the development would cause significant impact or harm. The AONB unit should be consulted and their views should be taken into consideration.

The site includes areas of priority habitat, the allocation is likely to:

- Result in a partial loss of Traditional Orchard priority habitat
- Have indirect impacts to Deciduous Woodland priority habitat.

Further assessment should be undertaken on the implications of the allocation on priority habitats/habitats of principle importance.

The proposal is likely to have an indirect impact to Ancient Woodland, further clarity on how these impacts will be avoided and fully mitigated should be provided as part of the site allocation process.

Tunbridge Wells Borough Council (TWBC) – Development of the site should only take place where there is no unacceptable adverse impact on health or amenity and appropriate mitigation should be implemented to minimise the impact. It should be the baseline that all mitigation which is reasonably practical should be implemented to protect residents.

In terms of both the existing situation, and potential growth, TWBC wishes to ensure that the further technical assessments are robust, thorough and have particular regard to the following, both in terms of the impact of individual sites and in terms of cumulative impact:

- Transport links, including highway safety and the operation of the highway network.
- Residential amenity, including in terms of impact via noise, dust, vehicle movements, air quality, vibration, etc.;
- Landscape impacts, including the setting of the Area of Outstanding Natural Beauty;
- Heritage: there are areas of potential archaeological importance within the vicinity of the allocations, as well as a number of Listed Buildings (some of which form part of historic farmsteads), the settings to which are important;
- Impact on the high-pressure gas pipeline;
- Ecology, including Local Wildlife Sites;
- Trees, including areas of Ancient Woodland;
- Flooding, both in terms of surface water and groundwater;
- Pollution, including in terms of the aquifer protection zone;
- Impact on the Green Belt, particularly having regard to the potential growth through the new TWBC Local Plan.

Southern Water – There is existing sewerage infrastructure crossing the site. This is not considered to be a fundamental constraint provided that appropriate provisions are made in the wording of any policy. The infrastructure must be protected, however diversion may be possible at the operator's expense, provided a feasible alternative route is available.

British Horse Society – The proposed location of this quarrying site borders Postern Lane, which is currently a public footpath and there is historical evidence that it was once a road connecting the Shipbourne Road (B2260) with Tudely Rd (B2017). This road should be preserved and available for all non-motorised users (NMUs). Whilst it is unlikely to be used by equestrians, if it could be upgraded to bridleway status, it would provide a useful link for cyclists.

Further to these requests in mitigation for the impact on local equestrians, after quarrying has finished reinstatement should make good use of the opportunity to provide new rights of way/road side margins and/or enhance the existing routes to provide access to all NMUs.

CPRE – Part of the northern edge and all of the eastern edge of the site lie within an area subject to adopted Tonbridge and Malling Managing Development and the Environment Development Plan Document Policy NE1 Local Sites of Wildlife, Geological and Geomorphological Interest.

There are no details of any buildings and processing plant associated with the operation of the site. The site is within the Green Belt and whilst mineral extraction is not considered to be inappropriate development, associated activities such as processing and restoration may affect the 'openness' and would need to demonstrate that 'very special circumstances' exist.

Kent Wildlife Trust – The site overlaps with Local Wildlife Site TM20 "East Tonbridge Copses and Dykes River Medway". This is a site of County importance for nature conservation. Kent Wildlife Trust object to the allocation until it can be shown that there will be no negative impact upon the designated site.

RSPB – The site will result in the direct loss of local wildlife sites and therefore share the Kent Wildlife Trust's objection to the allocation of the site.

Forestry Commission – Site assessment has identified:

- Ancient Woodland within 300m of the site
- Deciduous woodland within 500m of the site

As such, advice must be sought from the Government's Policy Statement on Forestry and Woodlands (2013), the NPPF and the NPPG.

KCC Advisors

In undertaking this detailed assessment, advice has been sought from a range of technical specialists who advise the County Council on planning matters. This includes advice on biodiversity, Public Rights of Way, noise, air quality, landscape, heritage, water resources, stability and highway and transportation interests. The views received have informed the assessment and the discussion section below. Several related standalone specialist reports have been prepared and have been published as background documents. The work has also been informed by the Project's Sustainability Appraisal work.

Views of local residents

Concerns raised by local residents during the options consultation included:

- Impact on local amenity by way of noise, dust and vibrations
- Impact on Ancient Woodland
- Impact on flora and fauna
- Impact on landscape and visual amenity
- Impact on public health
- Water supply pipeline crosses the site
- Impact on heritage assets - listed buildings and archaeology
- Extensive quarrying in the area historically
- Encroachment of nearby industry

- Lack of restoration of other quarries in the area is blighting the locality
- Impact on agricultural productivity, including the loss of grade 3 agricultural soil
- Located within the Green Belt
- Impact on High Weald AONB
- Highway infrastructure inadequate - surrounding roads are already damaged
- Impact on road safety
- Mineral is not of a good quality and has limited use in industry
- Lack of faith in operators nearby; sites have been abandoned or not restored properly. Lack of restoration causes safety concerns.
- Contamination of water resources
- Impact on PROWs such as the Medway Valley Walk
- Impact on flood risk
- Will deplete local water resources

2.0 Sustainability Appraisal

In accordance with statutory requirements a sustainability appraisal (SA) has been completed which considers how well the site performs against certain sustainability objectives. The detailed results of the SA are set out in a separate document.

3.0 Discussion

This section addresses matters raised above as well as those identified during the initial site assessment which are key to assessing the suitability of the site for allocation in the Kent Minerals Sites Plan.

Amenity

The promoted site has been assessed against policy DM11 of the KMWLP which requires that mineral development should not generate unacceptable impacts from noise, dust, vibration, odour, emissions, illumination, visual intrusion, traffic or exposure to health risks and associated damage to the qualities of life and wellbeing to communities and the environment. Similar policy protection is provided within the NPPF.

There are a number of residential properties within 50m of the site, the closest are within 10m. These sit along Postern Lane to the south-east and south-west corners of the site. There is a risk of impacts due to vehicle emissions, but the potential for impacts due to dust is greater due to the proximity of properties to the site boundary. However, it is considered that mitigation may be possible. Tonbridge High Street would need to be avoided by vehicles accessing the site as it is an Air Quality Management Area (AQMA).

Residential receptors which could be affected by noise are located to the south of the site. The level of mitigation which would be required for this may have secondary implications with regards to landscape and visual amenity (such as bunding) or impact upon the openness of the site which would be inappropriate within the Green Belt.

In light of the proximity of residential properties to the site and lack of information concerning mitigation measures it is not possible to conclude with certainty that it would be possible to reduce

impacts to acceptable levels.

Consideration of impacts on visual amenity is set out below.

Highways and Transportation

The proposed site has been assessed against policy DM13 of the KMWLP which requires that minerals development satisfy that the access arrangements are not detrimental to road safety, that the highway network is able to accommodate the traffic flows and will not give rise to unacceptable impact on the environment or local community and that emission control and reduction measures are proposed, particularly within an AQMA. Similar policy protection is provided for within the NPPF.

Access to the site would cross Postern Lane, before being sought through "Postern Industrial Estate" and meeting the A26. The site is on the outskirts of Tonbridge town, so traffic levels are already fairly high in the area.

The junction with Vale Road is a simple priority junction and scope for improvements is limited due to the river bridge immediately to the north of the site access. Vale Road and the adjoining highway network is already congested at peak times and therefore any significant intensification would need to be avoided.

There is concern over the capacity of the local highway network, and the suitability of HGVs crossing Postern Lane on a regular basis, as it constitutes a country road which is unsuitable for quarry traffic. Any alternative access would require travelling further along Postern Road, which would not be appropriate.

No information has been submitted to assess the impact of the site on the highway network, or demonstrate the suitability of such an access and so it is not possible to conclude that, in principle, the site would be acceptable with regard to highways impacts.

Landscape and Visual Amenity

The proposed site has been assessed against policy DM2 of the KMWLP which aims to ensure that there are no acceptable adverse impacts on important landscapes, including the Kent Downs AONB, and sets out the circumstances where impacts upon them would be acceptable. Policy DM2 notes that proposals outside, but within the setting of an AONB will be considered having regard to the effect on the purpose of conserving and enhancing the natural beauty of the AONB. This policy was prepared in line with the NPPF which sets out similar criteria. Impacts on visual amenity are assessed against policy DM11 that seeks to ensure that minerals development is unlikely to generate unacceptable adverse impacts from visual intrusion.

The site is approximately 1km away from the High Weald AONB. Given the low lying nature of the site and the abundant vegetation in the surrounding area, it is not considered that the site will have any impact on the setting of the AONB.

Assessment of landscape impacts concludes that these would be limited due to the fairly well enclosed nature of site which is due to vegetation. However, the properties on Postern Lane, and the PROWs, have clear views onto the site therefore significant adverse visual effects may result. Additionally, localised but significant adverse impacts upon the landscape may arise from the increased industrialisation within the Medway Valley at this edge of Tonbridge. Considerable

attention would need to be given to appropriate and effective mitigation measures.

Additional screen planting could provide suitable mitigation depending on the details to be submitted with any planning application. There could be a minor loss of existing trees and vegetation adjacent to an existing open drain transecting the site. Additional native planting would likely enhance the existing River Medway habitat whilst also providing additional screening during proposed extraction activities and address views across the site from the Medway Valley walk.

The site is to be restored to a landscaped lake but there are no other details. Whilst open water is acceptable, the creation of wetland, wetland scrub and marginal habitats would be favourable to increase the opportunity for further biodiversity. This would be enhanced by differing scrub and woodland mixes linking to the existing boundary habitats.

Overall the County Council considers that subject to certain matters being satisfactorily addressed at the planning application stage, the site is acceptable in principle on landscape grounds. There is less certainty that site could be made acceptable in terms of impacts on visual amenity as significant mitigation would be required.

Biodiversity

The proposed site has been assessed against policy DM3 of the KMWLP which requires that proposals do not result in unacceptable adverse impacts on Kent's important biodiversity assets and SSSIs. This policy was prepared in line with the NPPF which sets out similar criteria.

The site is adjacent to East Tonbridge copses and dykes and River Medway Local Wildlife Site (LWS), and the site is surrounded by mature trees and hedgerows, with the River Medway and Botany Stream running along the northern and eastern boundaries.

An area of Ancient Woodland exists within 250m to the east of the site.

It is considered that the proposal must avoid any impact on the LWS designation, and that there will be a need for ecological surveys to be carried out as part of any planning application and the restoration scheme must demonstrate that the restored site would provide ecological enhancements and enhance the habitat adjacent to the LWS.

Due to a lack of information concerning the extent of the activity at the site it is not certain that impacts on the LWS and the Ancient Woodland could be mitigated, therefore it is not possible to conclude that the site is acceptable in terms of impact on biodiversity at this stage.

Historic Environment

The proposed site has been assessed against policy DM5 of the KMWLP which requires that there should be no unacceptable adverse impact on Kent's historic environment taking account of mitigation and compensation and heritage assets be conserved in a manner appropriate to their significance. This policy was prepared in line with the NPPF which sets out similar criteria.

The closest designated heritage asset is the grade II listed building; Postern Heath Farmhouse, which is some 200m away from the site. The proposed access route will not pass this building and while there may be some indirect impacts on its setting it is considered that these could most likely be dealt with through appropriate mitigation.

There are no known archaeological remains within the site or in close proximity but it is considered

that deposits within the site do have potential for early prehistoric remains. Cultural Heritage would need to be addressed through a multi-phased programme both desk-based and field work, with mitigation fully informed and appropriate to the significance of the heritage assets affected. This would need to include palaeo-environmental and geoarchaeological assessment as well as regular broad ranged heritage assessment.-It is considered that potential impacts on features of archaeological interest could be addressed by appropriate monitoring and mitigation at the planning application stage.

It is considered that the potential impact of the site on the historic environment is not a matter that would preclude the site from allocation.

Need for the mineral

The proposed site has been assessed against policy CSM2 that sets out the requirements for the supply of sharp sand and gravel. This policy was prepared in line with NPPF.

The deposit in this location constitutes river terrace sand and gravels.

Calculations regarding supply and demand based on 2017 data, taken together with an 18-year landbank, suggest the shortfall is now in the order of 5.75mt for sharp sand and gravel¹⁴. The yield from this site is estimated to be 230,000 tonnes which would make a modest contribution to supply requirements.

British Geological Survey data indicates that terrace sands and gravel is an economic mineral. The actual economic viability of any one particular deposit largely depends on the local economy and specification for quarried materials supply. While the material may not currently have significant market demand, workings have occurred in the past in the locality and thus the economic viability of the deposit may improve, particularly as other land-won resources are increasingly depleted.

Green Belt

The proposed site has been assessed against policy DM4 of the KMWLP which states that development within the Green Belt will be considered in light of its potential impacts and shall comply with national policy and the NPPF policy on Green Belt.

The site is within the Metropolitan Green Belt. Subject to preserving openness of the Green Belt and not impacting on its purposes, mineral extraction is not considered to be inappropriate development, which is taken to include structures such as bunds, plant and machinery.

When compared to typical mineral extraction activities, the proposed area of extraction is not considered to be of great significance, however the proximity of receptors sensitive to visual impact could mean that the perception of openness of the Green Belt in this location is adversely affected.

As noted above, mitigation of visual impacts on nearby receptors may require development, such as bunding, that may impact on openness to the extent that the development is likely to be considered inappropriate within Green Belt as would processing equipment and on site offices.

Therefore, a case of Very Special Circumstances would need to be demonstrated whereby other considerations were shown to outweigh the harm to the Green Belt and any other harm. There is no certainty that such a case could be demonstrated.

¹⁴ See Sharp Sand and Gravels Topic Paper 2018

Water Environment

The proposed site has been assessed against policy DM10 of the KMWLP which requires that development should result in no deterioration and improved ecological status of all waterbodies within the site and/or hydrologically connected to the site. This policy was prepared in line with the NPPF.

The site is within Flood Zone 3 which has the highest probability of flooding. It also overlies an aquifer and it near to a SPZ.

KCC's Flood Risk Assessment concluded the following:

- The main potential source of flooding is from the River Medway and its tributaries.
- There is potential for a high water table at the site, resulting in a potential requirement for dewatering.
- As the development involves extraction of minerals as opposed to raising the ground level, it will not result in a loss of water storage for the flood plain. The resulting waterbodies could provide water storage and reduce flood risk off site.
- Further hydraulic modelling would be needed to establish the impact of the site on the watercourses, including the watercourse running through the site.

The underlying Tunbridge Wells Sand Formation is a principal aquifer unit and therefore any planning application would need to demonstrate that removal of the alluvium will not pose a risk to the aquifer.

In principle the EA are satisfied that the risk of impacts to water resources posed by this site is not a concern – any planning application would require appropriate investigation and modelling to be carried out to confirm the position.

It is considered that the potential impact of the site on the water environment is not a matter that would preclude the site from allocation.

Land Stability

The proposed site has been assessed against policy DM18 of the KMWLP which expects that planning permission for development will not be granted unless it is demonstrated that development will not result in land instability. This policy was prepared in line with the NPPF.

The County Council's land stability report¹⁵ concludes that the proposed operations will have a minimal risk in terms of land stability. There are very few sensitive receptors adjacent to the site with the exception of the banks of the River Medway. This can be mitigated by allowing appropriate standoff distance to ensure that the banks are not breached.

Soil Quality

The proposed site has been assessed against policy DM1 of the KMWLP which requires that proposals demonstrate that there is no unacceptable adverse impact on the use of other land for other purposes possible. This policy was prepared in line with the NPPF.

Natural England's Agricultural Land Classification Map states that the site contains Grade 3b Postern

¹⁵ KCC (amey) Land Stability Assessment Technical Report August 2018

Meadows comprises grade 3b agricultural soil which is considered to be moderate soil which has limitations on the range of crops it can yield. Furthermore, due to the limited size of the site it is not considered that development in this location would lead to a significant loss of agricultural soils.

PROW

The proposed site has been assessed against policy DM14 of the KMWLP which requires that where proposals impact a PROW, they will only be permitted if; satisfactory prior provisions for diversion of the PROW can be made which are convenient and safe for the PROWs users, an acceptable alternative route can be provided during operations and restoration, and opportunities to improve countryside access are taken wherever possible. This policy was prepared in line with the NPPF which sets out similar criteria.

PROW MU32 (Medway Valley Walk) runs to the north of the site on the other side of the River Medway. The views from this PROW will be impacted as it currently looks out onto the open pasture.

The south of the site is bounded by PROW MU33. The site access will intersect this PROW and it is not clear whether diversion will be possible.

Based on the information available, it is not possible to conclude whether the site will be acceptable in terms of impacts on PROWs at this stage.

Cumulative Impact

The proposed site has been assessed against policy DM12 of the KMWLP which expects that mineral development should not result in an unacceptable adverse, cumulative impact on the environment or communities. This policy was prepared in line with the NPPF which sets out similar criteria.

The KMWLP notes that cumulative impacts may occur where separate developments occur near to each other and there is a need for such impacts to be taken into account. The assessment of potential impacts which could arise from mineral development in this location is not sufficiently conclusive to establish whether unacceptable cumulative impacts would arise. In any event cumulative impacts would require further consideration if a proposal were to come forward.

4.0 Conclusion - M12: Postern Meadows, Tonbridge

It has not been possible to conclude that impacts on the following matters due to minerals development in this location could be mitigated to levels that would be acceptable:

- Biodiversity
- Highways and transportation
- Landscape
- Amenity
- PROWs

There is also insufficient information to conclude that mineral development in this location would not be in conflict with policy on Green Belt.

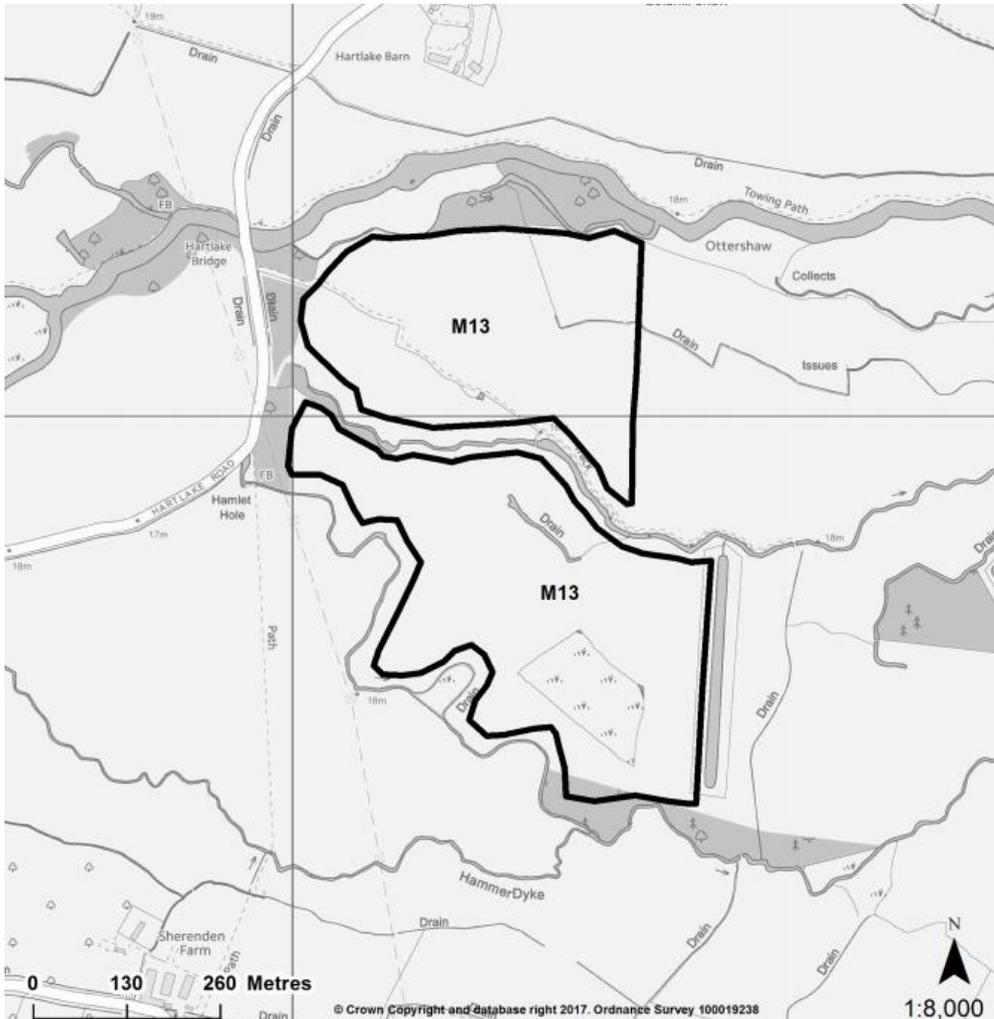
In the absence of information to demonstrate that the site will not adversely impact the above areas, it is not possible to conclude that the Postern Meadows site (M12) constitutes acceptable

development in principle. Therefore, the site should not be allocated.

The M12 site is not identified as a site in the Pre-Submission draft of the Mineral Sites Plan.

M13: Stonecastle Farm Quarry Extensions, Hadlow/Whested - Sharp Sand and Gravels

Site Location Plan



1.0 Matters addressed by Detailed Technical Assessment

Matters Identified by the Initial Site Assessment

As set out in section 3 of this report, the initial assessment of the site identified a number of matters which would require particular consideration, these were:

- Impact on landscape
- Impact on biodiversity
- Impact on the historic environment
- Impact on the water environment
- Loss of grade 3 agricultural soil
- Impact on PROWs and their setting
- Impact on services and utilities

- Impact on health and amenity
- Cumulative impact with other development in the area such as the industrial estate to the south
- Site is within the Green Belt

Matters Raised during the Options Consultation

The matters raised during the public consultation on this site are summarised below.

Views of key organisations

A summary of the responses from key organisations, including statutory consultees, is set out below which sets out the nature and extent of the concerns of such consultees especially with regard to the matters listed above.

Environment Agency (EA) – No objection to the allocation in principle.

In terms of groundwater, the site is an important setting for local water supply and further major extensions to the quarry may impact water supply options further investigation is therefore required.

The site poses a moderate water resource risk. It is anticipated that appropriate mitigation measures, substantiated through a detailed programme of monitoring, will be necessary.

The design of the restoration plan and in particular with reference to the proposed lakes and their interface with the adjoining River Medway, the Hammer Dyke and associated drains would need agreement with the EA. The site is underlain by Weald Clay Formation and there is some uncertainty as to how sustainable the restoration plan is, independent of a feed from any one of the watercourses that will bound the lakes, once the mineral has been extracted. The restoration plan will need to include evidence demonstrating how the integrity of those watercourses sited on the curtilage of the workings will be retained.

Two Abstraction Licences are sited within the vicinity of the proposed workings at Stonecastle Farm. Both Licence 9/40/03/0215/SR [Sherenden Farm, Tudley] and Licence 9/40/03/0474/G [South East Water, Hartlake] will need to be accounted for in terms of the operation phase and the subsequent restoration. The assessment will be required to determine whether the Stonecastle Farm option poses a risk of derogation to the licensees' regulated activities. South East Water will need to be consulted with, the proposal raising potential questions as to the longer-term viability of the superficial aquifer at Hartlake, from where the Company abstracts.

A licence should be sought from the Environment Agency should there be a requirement to dewater the site.

The site is within Flood Zone 3 and a precautionary approach should be applied, avoiding flood risk wherever possible. Any application must be accompanied by a detailed flood risk assessment.

No comments on biodiversity, however there are records of Nuttall's pondweed and Crassula in the area. Considered that the developer should accept responsibility for and contribute to the management of the species as part of the works.

South East Water – Working the site wet [as proposed] removes the requirement for dewatering and reduces the risk of impinging on groundwater levels at the abstraction, which previously gave concern over impacts on local water supply.

The hydrogeological appraisal of the site sets out the potential impacts on the aquifer and the abstraction along with proposed mitigation. This should be formalised through the planning process in consultation with SE Water.

Some concerns over the potential for increased turbidity and the increased vulnerability due to removal of the confining overburden. The site includes areas designated as Drinking Water Safeguard Zones for both surface water and groundwater, and there are existing problems with diffuse pollution within the catchment. The risks of pollutants entering the restored open lakes should therefore be considered.

A requirement for a Hydrometric Monitoring Strategy is supported. Monitoring at the existing locations should continue to allow an extension of the baseline data and be appropriate for the potential risks identified. The results of the monitoring should be regularly reviewed, and the conceptual model of the site updated as required. The future hydrometric monitoring requirements at the site should be agreed between the operator, the Environment Agency, Kent County Council and South East Water before any works on the site begin.

Any applicant carrying out activities within a groundwater source protection zone should follow and comply with the Environment Agency's approach to the management and protection of groundwater as outlined within their Groundwater Protection Position Statements and take all measures and precautions necessary to avoid deterioration in the quality of groundwater below the site.

Natural England – The proposed allocation is in close proximity to the High Weald AONB and the proposal should be assessed carefully to determine whether the development would cause significant impact or harm. Views of AONB unit should be taken into consideration.

The site includes areas of priority habitat, and the development will result in:

- Loss of Deciduous Woodland Priority Habitat
- An indirect impact on adjacent areas of Deciduous Woodland Priority Habitat.

Further assessment should be undertaken on the implications of the allocation on priority habitats/habitats of principle importance.

Tonbridge and Malling Borough Council

Cumulative impacts of several sites operating at the same time could be severe if not properly planned for and managed. Consideration and mitigation of cumulative impacts in terms of increased traffic movements is, particularly when considering the quality and size of local roads. Of particular concern is the cumulative impacts of noise, dust and vibration from the minerals operations and transportation on the amenity of nearby residents. In addition, cumulative impacts on flood risk, including surface water flooding should be assessed.

The sites lie within close proximity of the High Weald AONB and there are several long-range vistas that can be enjoyed from the vicinity of Stonecastle Farm. It is important that these are respected during the operation and restoration of the sites and that unacceptable adverse impacts are prevented.

There are several Listed Buildings within close proximity of Stonecastle Farm. Every effort should be made to protect these important heritage assets and their settings and unacceptable adverse impacts should be prevented.

Tunbridge Wells Borough Council – Development of the site should only take place where there is no unacceptable adverse impact on health or amenity and appropriate mitigation which is reasonably practical should be implemented to protect residents. Further technical assessments should be robust, thorough and have particular regard to the following, both in terms of the impact of individual sites and in terms of cumulative impact:

- Transport links, including highway safety, operation of the highway network and access to Stonecastle Farm;
- Residential amenity, including in terms of impact via noise, dust, vehicle movements, air quality, vibration, etc;
- Landscape impacts, including the setting of the AONB;
- Heritage: there are areas of potential archaeological importance within the vicinity of the allocations, as well as a number of Listed Buildings (some of which form part of historic farmsteads), the settings to which are important;
- Impact on the high-pressure gas pipeline;
- Ecology, including Local Wildlife Sites;
- Trees, including areas of ancient woodland;
- Flooding, both in terms of surface water and groundwater;
- Pollution, including in terms of the aquifer protection zone;
- Impact on the Green Belt, particularly having regard to the potential growth through the new TWBC Local Plan.

Hadlow Parish Council – Object to the allocation on a number of grounds:

- Concerns over previous arrangement regarding restoration and aftercare at the existing Stonecastle Farm Quarry site.
- Local roads are inadequate for HGVs and the proposal will cause road congestion.
- The impact on flood risk in the wider Medway River Basin needs to be addressed holistically; the proposal could have an adverse impact on flood risk in areas downstream.
- Proposal could have adverse impact on hydrogeology with long term implications.
- Adverse impact on biodiversity; impact on LWSs, Ancient Woodland and breeding populations of birds.
- Cumulative impact with other sites in the area will have an adverse impact on the local landscape character.
- PROW's run through the site which would be negatively impacted.
- Impact on the High Weald AONB.
- Loss of agricultural land and adverse impact on rural economy.

CPRE – Concerned with the following matters:

- Visual impact from the High Weald AONB.
- Severe impact on local roads by HGVs.
- Impacts on PROW, including the Medway Valley Walk and the Wealdway which run on the north side of the River Medway.
- No details of any buildings and processing plant which may impact the openness of the Green Belt and so be in conflict with national Green Belt policy.
- Negative cumulative impact taking account of the Moat Farm site

Consideration should be given to restoring the site to agriculture.

Kent Wildlife Trust – Object to the allocation until it can be demonstrated that there will be no negative impact on the adjacent Local Wildlife Site TM20. Proposed Phase 3 is also adjacent to the Ancient Woodland and therefore the proposal will need to demonstrate that there will be no negative impact on this designation.

RSPB – The site will result in the direct loss of local wildlife sites and therefore share the Kent Wildlife Trust's objection to the allocation of the site.

Forestry Commission – Site assessment has identified:

- BAP Habitat Deciduous Woodland within the site
- Ancient Woodland adjacent to the site

KCC Advisors

In undertaking this detailed assessment, advice has been sought from a range of technical specialists who advise the County Council on planning matters. This includes advice on biodiversity, Public Rights of Way, noise, air quality, landscape, heritage, water resources, stability and highway and transportation interests. The views received have informed the assessment and the discussion section below. Several related standalone specialist reports have been prepared and have been published as background documents. The work has also been informed by the Project's Sustainability Appraisal work.

Views of local residents

Concerns raised by local residents during the options consultation included:

- Impact on local amenity by way of noise, dust and vibrations
- Impact on flora and fauna including Ancient Woodland
- Impact on landscape, including High Weald AONB, and visual amenity
- Impact on public health
- Impact on heritage assets - listed buildings and archaeology
- Extensive quarrying in the area historically
- Encroachment of nearby industry
- Lack of restoration of other quarries in the area is blighting the locality
- Impact on agricultural productivity, including the loss of grade 3 agricultural soil
- Located within the Green Belt
- Highway infrastructure inadequate - surrounding roads are already damaged
- Impact on road safety
- Mineral is not of a good quality and has limited use in industry
- Lack of faith in operators nearby; sites have been abandoned or not restored properly. Lack of restoration causes safety concerns.
- Contamination and depletion of local water resources
- Impact on PROWs such as the Medway Valley Walk
- Impact on flood risk
- Will reveal overhead power cables
- Site previously refused planning permission in 2000

2.0 Sustainability Appraisal

In accordance with statutory requirements a sustainability appraisal (SA) has been completed which considers how well the site performs against certain sustainability objectives. The detailed results of the SA are set out in a separate document.

3.0 Discussion

This section addresses matters raised above as well as those identified during the initial site assessment which are key to assessing the suitability of the site for allocation in the Kent Minerals Sites Plan.

Amenity

The promoted site has been assessed against policy DM11 of the KMWLP which requires that mineral development should not generate unacceptable impacts from noise, dust, vibration, odour, emissions, illumination, visual intrusion, traffic or exposure to health risks and associated damage to the qualities of life and wellbeing to communities and the environment. Similar policy protection is provided within the NPPF.

The site is remote from any significant areas of residential development. The closest sensitive receptors are the residential properties to the north of the site off Hartlake Road, these are 250m away.

Background air quality is considered to be good. Sources of air pollution are likely to be background dusts from agriculture and some transboundary air pollution. It is considered that mitigation is fully achievable against possible adverse impacts. The wet working of the site will suppress dust emissions and so reduce risk of air quality impacts.

Ambient noise climate is likely to be quite low due to the distance of the site from any major roads or built up areas. It is considered that mitigation may be required to protect the properties to the north. Mitigation in the form of routing and hours of operation may be necessary to reduce the level of traffic related noise impacts on surrounding villages including Golden Green. Overall it is considered that sensitive receptors are such a distance away that any negative amenity impacts can be satisfactorily mitigated.

It is considered that mitigation of impacts on the local amenity to acceptable levels is likely to be achievable and so this matter should not preclude the site from allocation.

Highways and Transportation

The proposed site has been assessed against policy DM13 of the KMWLP which requires that minerals development satisfy that the access arrangements are not detrimental to road safety, that the highway network is able to accommodate the traffic flows and will not give rise to unacceptable impact on the environment or local community and that emission control and reduction measures are proposed, particularly within an AQMA. Similar policy support is provided for within the NPPF.

The promotor submitted a Transport Assessment which stated that the site would be served by the existing access to Stonecastle Farm Quarry on Whetsted Road, and all traffic would turn left out of the site in accordance with the existing permission. The transport assessment states that the

quantum of HGV traffic is not proposed to change, and neither is the level of employment on site. The report concluded that there would be no reason to exclude the site on highway safety grounds, and that the existing access remains suitable subject to a few minor repairs.

Planning permission for mineral extraction at Stonecastle Farm was most recently granted in 2017 after it was found that impacts on the highway were acceptable. Mitigation measures are already employed such as the prohibition of vehicles turning right on exiting the site to prevent them driving through surrounding villages.

The Council's Highways Officer considered that provided proposed extensions do not result in an increase of number of vehicle trips per day (meaning that the site would not be worked concurrently to the existing site) then the proposal would likely be acceptable. It is anticipated that the same conditions and restrictions would need to be imposed on the allocation as for the existing site. If this is the case, then the proposed allocation would not trigger the need for further mitigation.

In light of the above it is considered that potential impacts resulting from vehicles accessing the site are not a matter that would preclude the site from allocation.

Landscape and Visual Amenity

The proposed site has been assessed against policy DM2 of the KMWLP which aims to ensure that there are no acceptable adverse impacts on important landscapes, including the High Weald AONB, and sets out the circumstances where impacts upon them would be acceptable. Policy DM2 notes that proposals outside, but within the setting of an AONB will be considered having regard to the effect on the purpose of conserving and enhancing the natural beauty of the AONB. This policy was prepared in line with the NPPF which sets out similar criteria. Impacts on visual amenity are assessed against policy DM11 that seeks to ensure that mineral development is unlikely to generate unacceptable adverse impacts from visual intrusion.

The site is approximately 1km away from the High Weald AONB. It is considered that the site is highly unlikely to have any impact on the setting of the AONB given the low lying nature of the site and surrounding vegetation.

Assessment of landscape impacts concludes that the site is very well enclosed by vegetation cover and as such is not clearly visible from publicly accessible locations or from properties. The landscape of the site and surrounding area is of a scale and character that has potential to accommodate quarrying activity with only limited and localised adverse effects.

Detailed restoration proposals would need to demonstrate that the potential loss of BAP habitat deciduous woodland is offset by replacement woodland provision.

The adjacent Ancient Woodland should be retained and not detrimentally affected by the proposed works and should be enhanced by additional woodland planting where possible along the western and southern boundaries of the proposed quarry extension site.

Overall the County Council considers that subject to certain matters being satisfactorily addressed at the planning application stage, the site is acceptable in principle on landscape grounds.

Biodiversity

The proposed site has been assessed against policy DM3 of the KMWLP which requires that proposals do not result in unacceptable adverse impacts on Kent's important biodiversity assets and

SSSIs. This policy was prepared in line with the NPPF which sets out similar criteria.

An ecological appraisal provided by the promoter provides a good understanding of the likely species to be present within the site including protected/notable species. This appraisal concludes that there is suitable habitat within or adjacent to the site for a number of species.-

Information would need to be submitted as part of any planning application to demonstrate that appropriate mitigation of any habitat loss can be implemented. The applicant would need to demonstrate that they have sufficient land to create and establish replacement habitat. The restored areas of the wider site could be used as mitigation areas however this will need to be fully understood before work can commence.

Any loss of Deciduous Woodland Priority Habitat to the new lake area (post extraction) will be compensated with new woodland planting such that the amount of available woodland habitat does not change.

There is an area of Ancient Woodland to the south of the site, this is outside of the site boundary so will be excluded from the area of working. A suitable buffer will need to be implemented and maintained so that the designation is not impacted indirectly.

Local Wildlife Site TM20 sits to the north, there is potential that this could be indirectly impacted by the activities on taking place on site and as such suitable buffers and other mitigation will need to be employed.

In light of the above it is concluded that the site can be allocated as acceptable in principle on biodiversity grounds.

Historic Environment

The proposed site has been assessed against policy DM5 of the KMWLP which requires that there should be no unacceptable adverse impact on Kent's historic environment taking account of mitigation and compensation and heritage assets be conserved in a manner appropriate to their significance. This policy was prepared in line with the NPPF which sets out similar criteria.

The closest heritage assets are two listed buildings to the north of the site, separated by the River Medway and associated vegetation. The proposed access route will not pass them. There may be some indirect impacts on the setting of these buildings however these could be dealt with through appropriate mitigation. The nearest Conservation Area is Little Mill, East Peckham, which is approximately 2km away.

There are no known archaeological remains within the site or in close proximity. Deposits within this site do have potential for early prehistoric remains. Earlier extraction to the east has revealed remains of timber structures and a possible Saxon mill, demonstrating the potential for evidence of later prehistoric and later use and management of the water channels. A number of WWII defensive sites are located along the Medway to the north and features associated with these may fall within the proposed site.

Cultural Heritage would need to be addressed through a multi-phased programme both desk-based and field work, with mitigation fully informed and appropriate to the significance of the heritage assets affected. This would need to include palaeo-environmental and geoarchaeological

assessment as well as regular broad ranged heritage assessment.

Prior to permission for extension of the areas of extraction, the impact of the proposals upon the historic landscape and surviving features and Listed Buildings should be fully assessed and mitigation measures undertaken to avoid impacts including on their setting. The historic landscape should be taken into account during works and in later site landscaping and restoration programme.

Historic England has been consulted on the proposal to allocate this site for mineral working and it has not raised any specific concerns.

It is considered that potential for archaeology could be dealt with through appropriate monitoring and mitigation at the planning application stage and it is concluded that the potential impact of the site on the historic environment is not something which should preclude the site from allocation.

Need for the Material

The proposed site has been assessed against policy CSM2 that sets out the requirements for the supply of sharp sand and gravel. This policy was prepared in line with NPPF.

The deposit in this location constitutes river terrace sand and gravels.

Calculations regarding supply and demand based on 2017 data, taken together with an 18-year landbank, suggest the shortfall is now in the order of 5.75mt for sharp sand and gravel¹⁶. The yield from this site is estimated to be 1 million tonnes which would make a significant contribution to supply requirements.

British Geological Survey data indicates that terrace sands and gravel is an economic mineral. The actual economic viability of any one particular deposit largely depends on the local economy and specification for quarried materials supply. While the material may not currently have significant market demand, workings have occurred in the past in the locality and thus the economic viability of the deposit may improve, particularly as other land-won resources are increasingly depleted. In this instance, it is noted that the site has been promoted by Tarmac Trading Limited, an international aggregate company as an extension to existing quarrying activity at Stonecastle Farm.

Green Belt

The proposed site has been assessed against policy DM4 of the KMWLP which states that development within the Green Belt will be considered in light of its potential impacts and shall comply with national policy and the NPPF policy on Green Belt.

The site is within the Metropolitan Green Belt. Subject to preserving openness of the Green Belt and not impacting on its purposes, mineral extraction is not considered to be inappropriate development, which is taken to include structures such as bunds, plant and machinery.

The proposed area of extraction is significant but due its location below ground level and remoteness from sensitive visual receptors there will be little, if any, impact on the perception of openness. The arrangement with regards to plant and machinery are that those in the existing Stonecastle Farm Quarry site will be utilised. No clear requirement for screening bunds has been identified. Restoration is proposed to open water.

Therefore, in this instance, impact on the openness of the Green Belt is considered to be negligible. KCC's Landscape Assessment considered the impact of the site against the principle of openness

¹⁶ See Sharp Sand and Gravels Topic Paper 2018

and concluded that due to lack of clear view from receptors, there is little scope for visual impacts and impacts on openness to occur.

As such, it is concluded in principle that, as the mineral extraction is not inappropriate development and such development in this location would preserve openness and not conflict with the purposes of including land within the Green Belt, allocation of this site would not conflict with policy on Green Belt.

Water Environment

The proposed site has been assessed against policy DM10 of the KMWLP which requires that development should result in no deterioration and improved ecological status of all waterbodies within the site and/or hydrologically connected to the site. This policy was prepared in line with the NPPF.

The majority of the site is within Flood Zone 3 which has the highest probability of flooding. KCC's Flood Risk Assessment concluded the following:

- The main potential source of flooding to the site is fluvial flooding.
- There is potential for a high water table at the site, resulting in a potential requirement for dewatering.
- As the development involves an extraction of minerals as opposed to raising the ground level, it will not result in a loss of water storage for the flood plain. The resulting waterbodies could provide water storage and reduce flood risk off site.
- A 16 metre buffer should be provided around nearby watercourses.
- Further hydraulic modelling would be needed to establish the impact of the site on the watercourses, including the watercourse running through the site.

In terms of impact on groundwater resources; the site extends into Source Protection Zones 1, 2 and 3. When planning permission was sought for Stonecastle Farm Quarry (approximately 20 years ago) the two phases being promoted now were refused due to a lack of information on the impacts they would have on local water supply; the water company could not recommend that these two phases be granted planning permission.

The promoter has presented the water company (South East Water) with further information on the impacts to hydrology and hydrogeology. This included a commitment to "wet working" the site to remove the need for dewatering. South East Water have accepted that this reduces the risk of impinging on groundwater levels and are supportive of this change. They concluded that further monitoring would need to be carried out, and a Hydrometric Monitoring Strategy would need to form part of a development management requirement for the site.

Further engagement will be undertaken with South East Water and the Environment Agency in the event of a planning application to be submitted, and policy provision would ensure that appropriate monitoring and mitigation take place so that the site does not have an adverse impact on the water environment.

Overall it is considered that the potential impact of the site on the water environment is not a matter that would preclude the site from allocation.

Land Stability

The proposed site has been assessed against policy DM18 of the KMWLP which expects that planning permission for development will not be granted unless it is demonstrated that development will not result in land instability. This policy was prepared in line with the NPPF.

The County Council's land stability report¹⁷ concludes that the proposed operations will have a minimal risk in terms of land stability. There are very few sensitive receptors adjacent to the site and any impact can be mitigated. Land stability is not therefore a matter that would preclude the site from allocation.

Soil Quality

The proposed site has been assessed against policy DM1 of the KMWLP which requires that proposals demonstrate that there is no unacceptable adverse impact on the use of other land for other purposes possible. This policy was prepared in line with the NPPF.

Natural England's Agricultural Land Classification Map states that the site comprises grade 3b agricultural soil which is considered to be moderate soil which has limitations on the range of crops it can yield. Furthermore, due to the limited size of the site it is not considered that development in this location would lead to a significant loss of agricultural soils.

PROW

The proposed site has been assessed against policy DM14 of the KMWLP which requires that where proposals impact a PROW, they will only be permitted if; satisfactory prior provisions for diversion of the PROW can be made which are convenient and safe for the PROWs users, an acceptable alternative route can be provided during operations and restoration, and opportunities to improve countryside access are taken wherever possible. This policy was prepared in line with the NPPF which sets out similar criteria.

There are no PROWs which cross the site. PROW MT160 runs to the north of the site, separated by the River Medway and PROW TT168 runs to the south west of the site off of Hartlake Road.

Whilst these PROWs will not be directly affected or require any diversion, their setting will be altered due to the quarrying operations. The need for appropriate mitigation measures and their efficacy will be considered at planning application stage. It is therefore concluded that the site should not be excluded due to impacts on the PROW network.

Cumulative Impact

The proposed site has been assessed against policy DM12 of the KMWLP which expects that mineral development should not result in an unacceptable adverse, cumulative impact on the environment or communities. This policy was prepared in line with the NPPF which sets out similar criteria.

It is recognised other proposed site allocations for mineral working are in the surrounding area. The KMWLP notes that cumulative impacts may occur where separate developments occur near to each other and there is a need for such impacts to be taken into account. The assessment of potential impacts which could arise from development in this location has not revealed that unacceptable cumulative impacts would arise that could not be satisfactorily mitigated against, however cumulative impacts will require further consideration if a proposal were to come forward.

¹⁷ KCC (Amey) Land Stability Assessment Technical Report August 2018

4.0 Conclusion - M13: Stonecastle Farm Quarry Extensions, Hadlow/Whetsted

The volume of sharp sand and gravel needed to meet KMWLP requirements can be supported by allocation of this site. Adverse impacts associated with mineral development in this location can be addressed and satisfactorily mitigated through the planning application process.

The detailed assessment work has concluded that the Stonecastle Farm Quarry Extension site (M13) is acceptable in principle for mineral development, subject to compliance with the development management considerations, with particular reference to:

Transport

- A detailed transport assessment to demonstrate compliance with KMWLP Policy DM13
- All quarry traffic to utilise the existing Stonecastle Quarry access onto Whetsted Road, and only turn left when exiting the site.
- The site shall only be worked sequentially to the permitted phases at Stonecastle Farm Quarry or the Moat Farm Quarry (should planning permission be granted for this latter site). To avoid unacceptable impacts on the local highway network the M13 Stonecastle Farm Extension, the Moat Farm Site (M10) and the permitted Stonecastle Farm Quarry shall not be worked concurrently.

Water Resources

- A minimum 16 metre buffer will need to be provided between extraction and nearby watercourses.
- Demonstration that the site will have no adverse impacts on hydrology or hydrogeology. This should be undertaken in liaison with South East Water and the Environment Agency and will need to include (amongst other matters) the following:
 - o The risk of pollutants entering the restored open lakes
 - o A Hydrometric Monitoring Strategy; the results of this should be regularly reviewed and the conceptual model of the site updated as required
 - o Risk to derogation of the activities subject to Abstraction Licenses in the vicinity of the site.
- Compliance with the Environment Agency's approach to the management and protection of groundwater as outlined within their Groundwater Protection Position Statements and take all measures and precautions necessary to avoid deterioration in the quality of groundwater below the site.
- The restoration plan will need to have reference to the proposed lakes and their interface with the nearby watercourses in accordance with Environment Agency advice. It must also include evidence to demonstrate how the integrity of nearby watercourses will be retained.
- The two abstraction licenses within the vicinity of the site will need to be taken into account.
- Dewatering techniques must not be used that would impact local water resources.
- Any application will need to be accompanied by a detailed flood risk assessment.

Amenity

- A lighting, noise, dust and vibration management plan should be completed, setting out how unacceptable impacts will be avoided. A detailed dust assessment and management plan should be submitted which follows best practice and any national Government guidance (e.g. Planning Practice Guidance).
- Compliance with policy DM11 of the KMWLP in respect of health and amenity.

Biodiversity

- A detailed ecological appraisal setting out any mitigation measures needed to ensure there are no unacceptable impacts on Kent's biodiversity assets
- Detailed restoration proposals will need to demonstrate that the potential loss of the BAP habitat deciduous woodland is offset by replacement woodland provision within the proposed restoration plan. This should include a range of trees and shrub sizes to create a vertical design element to the planting.
- Any operations should exclude the Ancient Woodland and a suitable buffer should be employed as to not impact on the designation directly or indirectly
- Restoration scheme should incorporate additional woodland planting where possible, including native evergreen species along the western and southern boundaries of the proposed quarry extension site.
- Suitable buffer zones and mitigation to be proposed to mitigate impacts to Local Wildlife Site TM20.
- The developer to appropriately manage the Nuttall's pondweed and Crassula in the area.
- The need for compensatory replacement habitat

Heritage

- Further assessment of the potential impact of proposals on the historic landscape and surviving features is necessary and should account of the historic landscape should be taken during works and in later site landscaping and restoration programme.
- The impact of proposals upon the Listed Buildings should be fully assessed and mitigation measures undertaken to avoid impact on their setting.
- Any planning application should be accompanied by a full archaeological impact assessment to ascertain the extent of such remains.

M9 The Postern, Capel - Sharp Sand and Gravels

Site withdrawn by Promoter – unable to demonstrate acceptable access. **Not allocated in Pre-Submission Draft Mineral Sites Plan.**

6 Conclusion

Following the Call for Sites in 2016, 19 mineral sites were nominated for consideration for potential allocations in the Mineral Sites Plan. Nine of the sites were selected following initial assessment as 'Options' i.e. sites that were considered potentially suitable for allocation in the Kent Mineral Sites Plan, subject to public consultation and detailed technical assessment. These sites have been subject to public consultation, detailed technical assessment and Sustainability Appraisal. The work has concluded that three of the sites should progress as Preferred Options Sites for allocation in the Mineral Sites Plan – one soft sand site and two sharp sand and gravel sites. These sites are considered acceptable in principle for mineral development, subject to planning applications demonstrating that relevant development management criteria can be met.

In summary, the DTA concluded the following:

2.7 In summary, the DTA concluded the following:

M3 - Chapel Farm, Lenham - Western Site	Suitable for allocation in Pre-Submission Draft Mineral Sites Plan , subject to meeting development management criteria at planning application stage
M3 - Chapel Farm, Lenham - Eastern Site	Site withdrawn by promoter – due to likely unacceptable impact on heritage asset. Not allocated in Pre-Submission Draft Mineral Sites Plan.
M8 - West Malling Sandpit, Ryarsh	Site not allocated in Pre-Submission Draft Mineral Sites Plan – inconsistent with green belt policy with regard to inappropriate development. An alternative promoted soft sand site at Chapel Farm, Lenham lies outside the Green Belt and is considered acceptable in principle to meet the soft sand mineral requirements in Kent. It is not therefore reasonable to conclude that the necessary 'very special circumstances' exist to override the presumption against inappropriate development within the Green Belt. It is noted that the site is within the setting of the Kent Downs Area of Outstanding Natural Beauty (AONB) and the impacts upon the AONB are uncertain.
M2 - Lydd Quarry/Allen's Bank Ext, Lydd	Site not allocated in Pre-Submission Draft Mineral Sites Plan - Likely unacceptable impacts upon the Dungeness, Romney Marsh and Rye Bay Special Protection Area (SPA), the Special Area of Conservation (SAC) and the Ramsar Site; Likely unacceptable impact upon the Dungeness, Romney Marsh and Rye Bay Site of Special Scientific Interest (SSSI). In respect of parcel 23 (Allen's Bank), the likely unacceptable impact upon archaeological interests. It is noted that the impact upon the setting and character of the historic town of Lydd is uncertain.
M7 – Central Road, Dartford	Site not allocated in Pre-Submission Draft Mineral Sites Plan – Likely unacceptable highway impacts on Bob Dunn Way (A206) and on M25 Junction 1a (Dartford Crossing), likely unacceptable loss of

	biodiversity habitat, impact upon Local Wildlife Sites (LWS) and UK Biodiversity Action Plan (BAP) interests, likely unacceptable impacts on residential amenity, likely unacceptable air quality impact on AQMA and conflict with Local Plan open space objectives.
M10 - Moat Farm, Five Oak Green, Capel	Suitable for allocation in Pre-Submission Draft Mineral Sites Plan , subject to meeting development management criteria at planning application stage
M11 – Joyce Green Quarry, Dartford	Site not allocated in Pre-Submission Draft Mineral Sites Plan - Likely unacceptable highway impacts on Bob Dunn Way (A206) and on M25 Junction 1a (Dartford Crossing), likely unacceptable air quality impact on AQMA, likely unacceptable loss of biodiversity habitat, impact upon LWS and UK Biodiversity Action Plan (BAP) interests and uncertainty that restoration proposals would meet ecological objectives to replace habitat and conflict with Local Plan open space objectives. The mineral proposal is considered to be inappropriate development within the Green Belt through restoration proposals and harm arising from highway impacts, air quality and biodiversity impacts.
M12 - Postern Meadows, Tonbridge	Site not allocated in Pre-Submission Draft Mineral Sites Plan - insufficient evidence to complete DTA in order to conclude with any certainty that the development is acceptable in principle for mineral development.
M13 - Stonecastle Farm Quarry Ext, Hadlow/ Whested	Suitable for allocation in Pre-Submission Draft Mineral Sites Plan , subject to meeting development management criteria at planning application stage
M9 The Postern, Capel	Site withdrawn by Promoter – unable to demonstrate acceptable access. Not allocated in Pre-Submission Draft Mineral Sites Plan.

The three sites M3 - Chapel Farm, Lenham - Western Site, M10 - Moat Farm, Five Oak Green, Capel and M13 - Stonecastle Farm Quarry Ext, Hadlow/ Whested are considered suitable for allocation in the Pre-Submission Draft Mineral Sites Plan, subject to meeting development management criteria at planning application . These 3 sites are incorporated into the Pre-Submission Draft of the Kent Mineral Site Plan as site allocations for independent examination by an Inspector appointed by the Secretary of State for Housing, Communities and Local Government.

Appendix 1 – Initial Site Assessment - RAG Sensitivity Scoring Criteria

Opportunity/Constraint	RAG Sensitivity Score					Information source
	RED	RED-AMBER	AMBER	AMBER-GREEN	GREEN	
<p>Landscape Designations/Visual Impact</p> <p><i>Key considerations:</i></p> <p>The significance of any landscape and visual impact is dependent on a number of factors, such as the proximity to sensitive viewpoints, presence of screening features, direct effect on landscape fabric, existing landforms and the proximity to Kent's landscape designations of national importance.</p> <p>Kent has two nationally important landscape designations- the Kent Downs and the High Weald Areas of Outstanding Natural Beauty (AONB).</p>	<p>The site is in the AONB, there are no exceptional circumstances and the development cannot be demonstrated to be in the public interest².</p>	<p>The site is in the AONB but there may be exceptional circumstances and it may be in the public interest.</p> <p>The site is adjacent to or within the setting of the AONB and could have a major adverse impact on the landscape designation that could require high level mitigation.</p> <p>The site falls outside the AONB and could have a major adverse impact on the landscape that could be difficult to mitigate.</p> <p>The site is considered to have a major impact upon local landscape.</p>	<p>The site is the AONB, and there are exceptional circumstances and it is in the public interest but it could have an adverse impact on the landscape designation.</p> <p>The site is adjacent or within the setting of an AONB and could have a moderate adverse impact on the landscape designation, that could require medium level mitigation.</p> <p>The site falls outside the AONB and could have a moderate adverse impact on the landscape that could require medium level mitigation.</p> <p>The site is considered to have a moderate impact upon local landscape.</p>	<p>The site is adjacent to or within the setting of the AONB and could have a minor adverse impact on the landscape designation, requiring low level mitigation.</p> <p>The site falls outside the AONB and could have a minor adverse impact on the landscape that could require low level mitigation.</p> <p>The site is considered to have a minor adverse impact upon local landscape.</p>	<p>The site is not within the AONB or its setting and would have no impact on the landscape designation.</p> <p>The site falls outside the AONB and could have a very minor impact on the landscape designation that could be addressed with mitigation.</p> <p>The site is considered to have no impact upon local landscape.</p>	<p>GIS Data</p> <p>The Kent Landscape Assessment Parts 1 and 2 (2003) Landscape character area design guidance (Kent Downs AONB & High Weald AONB)</p> <p>Consultation with landscape specialists and Natural England.</p> <p>Promoter of site</p>

² NPPF paragraph 116 development proposals in AONB designations should be refused unless there are exceptional circumstances that can be demonstrated in the public interest.

	RAG Sensitivity Score					
<p>Nature Conservation and Geodiversity</p> <p><i>Key considerations:</i></p> <p>Proximity to international designations. E.g. SAC, SPA, Ramsar</p> <p>Proximity to national designations. E.g. SSSI, National Nature Reserve, Ancient Woodland.</p> <p>Proximity to Local Designations. E.g. Regionally important Geological and Geomorphological Sites (RIGS), Local Wildlife Sites, SNCI and Biodiversity Action Plan (BAP) Habitats³</p> <p>With all designations the proximity, perceived adverse impacts and the potential for mitigation should be considered.</p> <p>Potential for enhancement of local designations can be taken into account.</p>	<p>The site is likely to have a significant effect on international designations and mitigation measures are not available.</p> <p>Site is within or could have unacceptable adverse impact on national designations</p> <p>Impact likely to be severe.</p>	<p>The site is likely to have a significant effect on international designations, mitigation measures are available but are of a nature which means they may not be deliverable.</p> <p>Site is within or could have unacceptable adverse impact on national and/or local designations where there is no evidence the impacts can be mitigated or compensated such that there is net benefit.</p> <p>Impact is likely to be severe to moderate.</p> <p>The site is considered to have a major impact upon local sensitivity receptors.</p>	<p>The site is likely to have a significant effect on international designations, mitigation measures are possible but not included in the proposal.</p> <p>Site is within or could have unacceptable adverse impact on national and/or local designations but there is persuasive evidence of the impacts can be mitigated or compensated such that there is net benefit.</p> <p>Impact is likely to be severe to moderate.</p> <p>The site is considered to have a moderate impact upon local sensitivity receptors.</p>	<p>The site could potentially impact international designations and mitigation measures are included in the proposal which are sufficient enough to avoid a likely significant effect.</p> <p>The site is unlikely to have an unacceptable impact on national and/or local designations. Impacts could be addressed with mitigation.</p> <p>Impact likely to be minor.</p> <p>The site is considered to have a minor impact upon local sensitivity receptors.</p>	<p>The site is not likely to have a significant effect on international, national or local designations.</p> <p>The site is considered to have no impact upon local sensitivity receptors.</p>	<p>GIS data</p> <p>Consultation with Natural England and biodiversity officers</p> <p>Promoter of site</p>

³ Section 41 of the Natural Environment and Rural Communities (NERC) Act (2006)

	RAG Sensitivity Score					
<p>Historic Environment</p> <p><i>Key considerations:</i> Proximity to Kent's heritage assets, including registered historic parks and gardens, Listed Buildings, a conservation area or its setting, World Heritage Sites, Scheduled Ancient Monuments, archaeological sites and features and defined heritage coastline. There is a presumption in favour of preserving Listed Buildings and their setting, nationally important archaeological remains in situ and their setting. Proposals for development should not have an adverse effect on Kent's heritage assets including its fabric, setting, amenity value and arrangements for reinstatement</p>	<p>The site could cause a severe unacceptable adverse impact on Kent's heritage assets and/or their setting. No opportunity to maintain or enhance historic asset.</p>	<p>The site may cause a major adverse impact to Kent's heritage assets and/or its setting in the absence of high level mitigation.</p>	<p>The site may cause a moderate adverse impact to Kent's heritage assets and/or its setting in the absence of medium level mitigation.</p>	<p>The site may cause a minor adverse impact to Kent's heritage assets and/or its setting in the absence of low level mitigation.</p> <p>High possibility to result in net planning benefit.</p>	<p>The site may not cause any adverse impact to Kent's heritage assets and/or its setting.</p>	<p>GIS data</p> <p>Consultation with Historic England and officers specialised in archaeology and the historic environment</p> <p>Promoter of site</p>

	RAG Sensitivity Score					
<p>Water Environment (Including flooding)</p> <p><i>Key considerations:</i></p> <p>Proximity to Source Protection Zones (SPZ) or major/minor aquifers</p> <p>Proximity to vulnerable above-ground water bodies. The Water Framework Directive objectives seek no deterioration in current water quality and good status in all water bodies.</p> <p>Proximity to Flood Zones - dependent on type of development (Ref: Planning Practice Guidance*)</p> <p>Mineral extraction can provide opportunities for flood water and general water storage</p> <p><i>Note: The sites will be subject to a separate Sequential Testing exercise in accordance with the NPPF at Stage 3.</i></p>	<p>The site could have a severe unacceptable adverse impact upon groundwater SPZs and/or result in the deterioration of any water resource.</p> <p>The site will exacerbate flood risk in areas prone to flooding.</p> <p>The site could have a severe unacceptable impact upon waterbodies within the site and or hydrologically connected to the site.</p> <p>The site is classed as: "Development should not be permitted" according to the Flood Risk Vulnerability and Flood Zone Compatibility Table in the Planning Practice Guidance*</p> <p>Phase 1 and Phase 2 Hydrogeological Risk Assessment would be required prior to allocation.</p>	<p>The site could have a major adverse impact on groundwater SPZs or water resources in the absence of high level mitigation.</p> <p>The site is classed as: 'Exception Test Required', according to the Flood Risk Vulnerability and Flood Zone Compatibility Table in the Planning Practice Guidance and other sources of flooding could have a major impact requiring high levels of mitigation</p> <p>The site may have a major impact on vulnerable water bodies in the absence of high level mitigation.</p> <p>Phase 1 Hydrogeological Risk Assessment would be required prior to allocation.</p>	<p>The site could have a moderate adverse impact on groundwater SPZs or water resources in the absence of medium level mitigation</p> <p>The site is classed as: 'Exception Test Required' according to the Flood Risk Vulnerability and Flood Zone Compatibility Table in the Planning Practice Guidance and other sources of flooding could have a moderate impact requiring mitigation</p> <p>The site may have a moderate impact on vulnerable water bodies in the absence of medium level mitigation.</p> <p>Phase 1 Hydrogeological Risk Assessment would be required prior to allocation</p>	<p>The site could have a minor adverse impact on groundwater SPZs or water resources in the absence of low level mitigation.</p> <p>The site is classed as: 'Development is appropriate', according to the Flood Risk Vulnerability and Flood Zone Compatibility Table in the Planning Practice Guidance and other sources of flooding could have a minor impact that can be mitigated</p> <p>The site may have a minor impact on vulnerable water bodies in the absence of low level mitigation.</p>	<p>The Site will have no unacceptable impact on water resources.</p> <p>'Development is appropriate' according to the Flood Risk Vulnerability and Flood Zone Compatibility Table in the Planning Practice Guidance and other sources of flooding could have no impact.</p> <p>Good opportunities for flood risk mitigation.</p>	<p>GIS Data</p> <p>Consultation with the Environment Agency and flood risk officers.</p> <p>Strategic Flood Risk Assessment (SFRA)</p> <p>Promoter of site</p>

	RAG Sensitivity Score					
<p>Air Quality</p> <p><i>Key considerations:</i></p> <p>Emissions to air can be of concern at some facilities- dealt with at planning application stage if necessary through use of conditions and controls</p> <p>Proximity to Air Quality Management Areas- Impacts on AQMA could be mitigated by conditions and controls.</p>	<p>The site is within an AQMA, unacceptable adverse impacts cannot be mitigated.</p>	<p>NA</p>	<p>The site is near to an AQMA or may have adverse impacts on air quality that is capable of mitigation.</p>	<p>NA</p>	<p>The site poses low or no risk of adverse impacts to AQMAs or air quality.</p>	<p>GIS Data</p> <p>Officer assessment</p> <p>Promoter of site</p>
<p>Soil Quality</p> <p><i>Key considerations:</i></p> <p>Proximity or location of best and most versatile agricultural land. Where significant development of agricultural land is unavoidable, poorer quality land should be used in preference to higher quality.</p> <p>Consider location of sensitive land and soils Potential for enhancement</p>	<p>The entire site contains best and most versatile agricultural land which could be severely impacted by the development.</p>	<p>Large parts of the site contain best and most versatile agricultural land which could be majorly impacted by the development.</p>	<p>Small parts of the site contain best and most versatile agricultural land which could be moderately impacted by the development</p> <p>Opportunities for mitigation and restoration exist.</p>	<p>The could impact best and most versatile agricultural land which could require minor mitigation.</p> <p>Good opportunities for mitigation and restoration.</p>	<p>The site contains low quality soil</p> <p>There could be opportunities to restore the site such that the quality of soil is enhanced.</p>	<p>GIS data</p> <p>Consultation with landscape officers and Natural England if necessary</p> <p>Officer Assessment</p> <p>Promoter of site</p>

	RAG Sensitivity Score					
<p>Public Rights of Way (PRoW)</p> <p><i>Key considerations:</i></p> <p>Consider the presence of public rights of way (Highways Act 1980 Section 41)</p> <p>Highways Act 1980 Section 130(1), duty of highway authority to assert and protect the rights of the public to the use and enjoyment of any highway</p> <p>Impact on long distance trails (e.g. North Downs Way and England Coast Path)</p> <p>Potential for enhancement (would be sought at all sites)</p>	<p>The site is likely to cause severe unacceptable adverse impact upon the PRoW without satisfactory provision for diversion and/or mitigation.</p> <p>Significant adverse impact upon Kent's Long Distance Trails.</p>	<p>The site is likely to cause major adverse impact upon the PRoW network and Kent's Long Distance Trails but this could be satisfactorily diverted and/or extensively mitigated</p>	<p>The site could cause moderate adverse impact upon the PRoW network and Kent's Long Distance Trails but this could be satisfactorily diverted and/or mitigated.</p>	<p>Site is in the vicinity of a the PRoW network and Kent's Long Distance Trails and may only cause minor adverse impacts on PRoW network and Kent's Long Distance Trails</p>	<p>Site will have no effect on PRoW network and Kent's Long Distance Trails.</p> <p>An opportunity for enhancement has been identified.</p>	<p>GIS data</p> <p>Consultation with the County Council's PRoW officers</p> <p>Promoter of site</p>

	RAG Sensitivity Score					
<p>Transport (Including Access)</p> <p><i>Key considerations:</i></p> <p>Proximity to Kent's Trunk Roads, Primary Route Network and Secondary Route Network will be assessed, including the presence of width, height and weight restrictions along these routes</p>	<p>The site could have a severe unacceptable adverse impact on transport and access in the absence of high level mitigation.</p> <p>There are severe issues with access to the Primary Route Network and Secondary Route Network.</p> <p>Mitigation is not practical.</p>	<p>The site could have a major adverse impact on transport and access in the absence of high level mitigation.</p> <p>There are major issues with access to the Primary Route Network and Secondary Route Network.</p> <p>The identified impacts could be mitigated in principle but this might not be deliverable.</p>	<p>The site could have a moderate adverse impact on transport and access in the absence of medium level mitigation.</p> <p>There are moderate issues with access to the Primary Route Network and Secondary Route Network.</p> <p>The identified impacts could be mitigated through planning obligations.</p>	<p>The site could have a minor adverse impact on transport and access in the absence of low level mitigation.</p> <p>There are minor issues with access to the Primary Route Network and Secondary Route Network.</p> <p>The identified impacts could likely be mitigated through planning obligations.</p>	<p>The site will not give rise to any adverse impacts upon transport and access to Primary and Secondary Route Network.</p>	<p>GIS data</p> <p>Officer assessment</p> <p>Promoter of site</p>
<p>Services and Utilities</p> <p><i>Key considerations:</i></p> <p>Sites need sustainable access to utilities.</p> <p>Equally, they should not interfere with any utilities which pass underneath. Mitigation measures will be considered in terms of cost and benefits.</p> <p>Utilities include water, gas, electricity and telecommunications, as well as railways, HS1 and Crossrail assets.</p>	<p>The site contains services or utilities which could be severely impacted on and no mitigation measures can be used.</p>	<p>The site contains services or utilities which could require major mitigation through rerouting, and/or the location of cables/pipes hampers the ability to maximise capacity yield from the site.</p>	<p>The site contains services or utilities that would require consideration through re-routing or other medium levels of mitigation</p>	<p>The site is near to services or utilities and any minor adverse impacts may require low-level mitigation.</p>	<p>There are no services or utilities near to, or within the site.</p>	<p>Officer assessment</p> <p>Utility providers</p> <p>Promoter of site</p>

	RAG Sensitivity Score					
<p>Health and Amenity</p> <p><i>Key considerations:</i></p> <p>This includes impact of noise, dust, vibration, odour, emissions, bioaerosols, illumination, visual intrusion, traffic, quality of life and community and environment wellbeing. The National Planning Policy Framework (NPPF) and the KMWLP state that the adverse impact of minerals and waste development on neighbouring communities should be minimised.</p> <p>Consider proximity of local communities whose amenity may be impacted by development</p> <p>Appropriate and suitable mitigation measures to reduce the risk of unacceptable adverse impacts should be considered.</p>	<p>The site could cause severe unacceptable adverse impact on health and amenity and/or adjacent land uses with no mitigation demonstrated.</p>	<p>The site could cause a major adverse impact to health and amenity and/or adjacent land uses in the absence of a high levels of mitigation as demonstrated.</p>	<p>The site may cause a moderate adverse impact to health and amenity and/or adjacent land uses in the absence of a medium levels of mitigation as demonstrated</p> <p>Possibility to result in net planning benefit.</p>	<p>The site may cause a minor adverse impact to health and amenity and/or adjacent land uses in the absence of low level mitigation.</p> <p>High possibility to result in net planning benefit.</p>	<p>The site may not cause any adverse impact to health and amenity and/or adjacent land uses.</p>	<p>Officer assessment</p> <p>Promoter of site</p>

	RAG Sensitivity Score					
<p>Cumulative Impacts</p> <p><i>Key considerations:</i></p> <p>NPPF states that policies and proposals should take account of existing activity and impacts, the duration and nature of proposals for new or further workings, and the extent of impacts that a particular site, locality, community, environment or wider areas of mineral working can reasonably be expected to tolerate over a particular or proposed period.</p>	<p>The cumulation of activity at the site with existing development will result in an unacceptable adverse impact on the environment and/or communities that cannot be satisfactorily mitigated.</p>	<p>The cumulation of activity at the site with existing development may result in an unacceptable adverse impact on the environment and community that will require high level mitigation.</p>	<p>The cumulation of activity at the site with existing development may result in moderate impact on the environment and community that will require medium level mitigation.</p>	<p>The cumulation of activity at the site with existing development may have some impact on the environment and community that will require low level mitigation.</p>	<p>There are no concerns of cumulative impacts resulting from the development of the site.</p>	<p>Officer assessment</p> <p>Promoter of site</p>

	RAG Sensitivity Score					
<p>Airport Safeguarding Zones</p> <p><i>Key considerations:</i></p> <p>Aircraft are vulnerable to birdstrikes, and 80% of all strikes occur on an aircraft's take-off or landing phase of flight, therefore highlighting the necessity for wildlife management on and within proximity of an airfield. Aerodrome administrators are responsible for monitoring bird activity within the relevant radius of the aerodrome. This is to mitigate the birdstrike risk to aircraft and be aware what species are in the local area. Many types of development, including large, flat-roofed structures, landfill sites, gravel pit restoration schemes and nature reserves</p>	<p>The site is within an Airport Safeguarding Zone and the nature of the site is likely to attract birds and increase the risk of bird strike for aircraft.</p> <p>No mitigation is practical or possible.</p>	<p>The site is within an Airport Safeguarding Zone and the nature of the site is likely to attract birds and increase the risk of bird strike for aircraft.</p> <p>High level mitigation is required which may make the site undeliverable.</p>	<p>Site is within an Airport Safeguarding Zone. Either:</p> <p>Nature of the site means that it is unlikely to attract birds and increase the risk of birdstrike for aircraft.</p> <p>The site is likely to be deliverable through employing medium level mitigation measures so it is unlikely to attract birds and increase the risk of birdstrike.</p>	<p>Site is within an Airport Safeguarding Zone. Either:</p> <p>Nature of the site means that it is unlikely to attract birds and increase the risk of birdstrike for aircraft.</p> <p>The site is likely to be deliverable through employing low level mitigation measures so it is unlikely to attract birds and increase the risk of birdstrike.</p>	<p>The site is not within an Airport Safeguarding Zone.</p>	<p>CAA, NATS</p> <p>Officer assessment</p> <p>Promoter of site</p>
<p>Green Belt</p> <p><i>Key considerations:</i></p> <p>Within the NPPF is a presumption to consider development within the Green Belt as inappropriate.</p> <p>Inappropriate development is by definition, harmful to the openness of the Green Belt and should be refused except in very special circumstances. There are certain types of development which are exceptions to this rule, they do not require Very Special Circumstances.</p>	<p>Site constitutes inappropriate development within the Green Belt, and no substantive case for very special circumstances has been presented.</p>	<p>Site constitutes inappropriate development within the Green Belt and a case for very special circumstances has been presented. Major levels of mitigation may be required.</p>	<p>Site constitutes inappropriate development within the Green Belt, but a substantive persuasive case for very special circumstances has been presented. Medium levels of mitigation may be required.</p>	<p>Site constitutes inappropriate development within the Green Belt and a substantive persuasive case for very special circumstances has been presented. Low levels of mitigation may be required.</p>	<p>Site is not within the Green Belt.</p> <p>Site is within the Green Belt but it is not considered inappropriate development</p>	<p>GIS data</p> <p>Officer assessment</p> <p>Promoter of site</p>

Appendix 2 - Green Belt Considerations – West Malling Sandpit (M8)

1. Introduction

1.1 This report provides details of Green Belt policy at national and local level, a summary of prevailing case law and an assessment of the M8 -West Malling Site.

Policy Considerations

National Planning Policy Framework 2018 (NPPF)

2.1 Green Belt policy is set out in the National Planning Policy Framework, paragraphs 133 - 147. Para 133 states: “The Government attaches great importance to Green Belts. The fundamental aim of Green Belt policy is to prevent urban sprawl by keeping land permanently open; the essential characteristics of Green Belts are their openness and their permanence”.

And para 134 notes:

“Green Belt serves five purposes:

- a) to check the unrestricted sprawl of large built-up areas;
- b) to prevent neighbouring towns merging into one another;
- c) to assist in safeguarding the countryside from encroachment;
- d) to preserve the setting and special character of historic towns; and
- e) to assist in urban regeneration, by encouraging the recycling of derelict and other urban land.”

2.2 Para 141 states: “Once Green Belts have been defined, local planning authorities should plan positively to enhance their beneficial use, such as looking for opportunities to provide access; to provide opportunities for outdoor sport and recreation; to retain and enhance landscapes, visual amenity and biodiversity; or to improve damaged and derelict land.”

2.3 In considering proposals affecting the Green Belt, policy (para 143 states that: “Inappropriate development is, by definition, harmful to the Green Belt and should not be approved except in very special circumstances”.

2.4 Paragraph 144 states “When considering any planning application, local planning authorities should ensure that substantial weight is given to any harm to the Green Belt. “Very special circumstances” will not exist unless the potential harm to the Green Belt by reason of inappropriateness, and any other harm resulting from the proposal is clearly outweighed by other considerations.

2.5 For the purposes of planning decisions a local planning authority should regard the construction of new buildings as inappropriate in the Green Belt. There are a limited number of exceptions to this as set out in paragraph 145, being:

- a) buildings for agriculture and forestry;
- b) the provision of appropriate facilities (in connection with the existing use of land or a change of use) for outdoor sport, outdoor recreation, cemeteries and burial grounds and allotments; as long as the facilities preserve the openness of the Green Belt and do not conflict with the purposes of including land within it;
- c) the extension or alteration of a building provided that it does not result in disproportionate additions over and above the size of the original building;

- d) the replacement of a building, provided the new building is in the same use and not materially larger than the one it replaces;
- e) limited infilling in villages;
- f) limited affordable housing for local community needs under policies set out in the development plan (including policies for rural exception sites); and
- g) limited infilling or the partial or complete redevelopment of previously developed land, whether redundant or in continuing use (excluding temporary buildings), which would not have a greater impact on the openness of the Green Belt than the existing development; or not cause substantial harm to the openness of the Green Belt, where the development would re-use previously developed land and contribute to meeting an identified affordable housing need within the area of the local planning authority.

2.6 Certain other forms of development are also not inappropriate for the purposes of Green Belt policy provided they preserve its openness and do not conflict with the purposes of including land within it. These are listed in paragraph 146 as:

- a) mineral extraction;**
- b) engineering operations;
- c) local transport infrastructure which can demonstrate a requirement for a Green Belt location;
- d) the re-use of buildings provided that the buildings are of permanent and substantial construction;
- e) material changes in the use of land (such as changes of use for outdoor sport or recreation, or for cemeteries and burial grounds); and
- f) development brought forward under a Community Right to Build Order or Neighbourhood Development Order.

2.7 Where a development is considered inappropriate development for the purposes of Green Belt policy, 'very special circumstances' will need to be demonstrated if projects are to be acceptable.

2.8 Whether 'very special circumstances' exist involves consideration of whether the harm caused to the Green Belt (or any other harm) by reasons of the development's inappropriateness is clearly outweighed by other considerations. In forming a view as to whether inappropriateness is outweighed by other considerations, it is not unreasonable to draw on the 'exceptional circumstances', listed in para 137, which must exist to justify removing land from the Green Belt. These include:

1. Whether as much use as possible of suitable brownfield sites and underutilised land has been made;
2. Whether the density of development has been optimised;
3. Whether other authorities could accommodate some of the identified need for development, as demonstrated through the statement of common ground.

2.9 Essentially therefore, for minerals development deemed inappropriate, it follows that consideration of whether the demands for the mineral can be met from elsewhere must be an important element in the decision.

Kent Minerals and Waste Local Plan 2013-30 (KMWLP)

2.10 Policy DM4 and explanatory text of the adopted KMWLP relates to Green Belt. The Policy states:

'Proposals for minerals and waste development within the Green Belt will be considered in light of their potential impacts and shall comply with national policy and the NPPF.'

2.11 The explanatory text in Section 7.3 of the KMWLP recognises national guidance on the purpose of the Green Belt and what constitutes inappropriate development. Paragraph 7.3.2 states "Proposals for minerals and waste development within the Green Belt will be considered in light of their potential impacts, national policy and the National Planning Policy Framework".

2.12 Paragraph 7.3.3 states "There is a presumption against inappropriate development within the Green Belt. Inappropriate development is, by definition harmful to the Green Belt and should not be approved except in very special circumstances. When considering any planning application, the planning authority will ensure that substantial weight is given to any harm to the Green Belt. 'Very special circumstances' will not exist unless the potential harm to the Green Belt by reason of inappropriateness, and any other harm, is clearly outweighed by other considerations."

2.13 Paragraph 7.3.4 provides guidance on what constitutes inappropriate development. It states "*The National Planning Policy Framework provides guidance on the purposes of the Green Belt and what constitutes inappropriate development. It states that minerals extraction, engineering operations and the re-use of building provided that the buildings are of permanent and substantial construction are not inappropriate development in the Green Belt provided that they preserve the openness of the Green Belt and proposals do not conflict with the purpose of including land in the Green Belt. Processing plant, although commonly associated with mineral extraction, is unlikely to preserve openness owing to its size, height and industrial appearance and would therefore be inappropriate development. In such cases developers will need to demonstrate very special circumstances if projects are to proceed.*"

3 Prevailing Case Law

3.1 Prevailing case law is set out in Appendix A.

Site M8: West Malling

Proposal

- 4.1 The promoted site comprises an area of 20.8 ha of which 12ha, mainly located within the western extent of the site, is promoted as a potential mineral extraction area.
- 4.2 The site has the potential to yield approximately 3.1mt of soft sand and 0.5mt of silica sand. The proposed development would include mineral extraction at depths ranging from 8.1m to 24.6m and ancillary facilities such as site access roads, offices, welfare facilities, HGV and car parking. A Landscape and Visual Appraisal document prepared by Waterman Infrastructure & Environmental Limited on behalf of the promoter states that the site offices and welfare facilities would be located within a single storey unit at current ground level. Mobile plant, screener and stockpiles would be located at current ground level during the first 6-12 months of the development. The site would be worked in phases with progressive restoration involving infilling with inert wastes to follow on from mineral extraction. Overburden from phase 1 would be used to create bunds by the site entrance from Roughetts Road. Further overburden would be used to create bunds at an approximate height of 3m along the eastern boundary of the extraction area with added planting to screen the extraction activities. The site would function as a mineral extraction site for 24 years and a further 5 years to complete restoration, which aims to restore the site to its original agricultural (grade 3b) land use after 5 years by infilling with inert materials.
- 4.3 The West Malling site lies immediately south of the M20 motorway. Access is proposed from Roughetts Road and then onto the A20 which lies to the south of the site. The nearby settlement pattern is relatively dispersed, with the closest properties to the site boundary to the east along Roughetts Road and to the south of the site being 40m and 10m respectively. The Kent Downs Area of Outstanding Natural Beauty (AONB) lies to the north of the site with its southern boundary abutting the M20 motorway. Ancient Woodland is located within the promoted area to the south of the site. Whilst the originally submitted drawings indicate that the exact position of the boundary with the woodland would be confirmed at a later date, the plan submitted as part of the Transport Assessment prepared on behalf of the promoter identifies the potential extraction area to the north of the ancient woodland. This would accord with a briefing document dated 28th August 2018 sent to Ryarsh Parish Council, and available on the promoter's website, that states that the woodland would not be worked and that a standoff of 30m is proposed. Two public footpaths run through the site and would need to be temporarily diverted during development.

Green Belt Considerations

- 4.4 For the site to be allocated for mineral extraction in the Mineral Sites Plan, the site option has to be acceptable in principle, having regard to planning policy, guidance and relevant case law. In applying Green Belt policy, there are a number of matters to be considered:
 - I. Is the development appropriate or inappropriate development?
 - II. If inappropriate, are there very special circumstances that exist that clearly outweigh the harm to the green belt by reason of its inappropriateness or other harm resulting from the proposal?

4.5 Therefore the starting point for Green Belt considerations is to establish whether the development is inappropriate or not in terms of Green Belt policy. In this regard 'the development' is taken to comprise two distinct activities as follows:

1. Mineral extraction
2. Restoration by infilling with inert waste

The assessment below therefore considers these activities separately as follows:

Mineral extraction

4.6 Planning policy concerning development within Green Belt recognises that mineral extraction is capable of being appropriate development within Green Belt, where it preserves openness and does not conflict with the purposes of including land within the Green Belt. The NPPF plainly envisages that mineral extraction may harm openness but that it will not inevitably do so.

4.7 In accordance with case law, structures which are "generally encountered" in the context of the potentially appropriate type of development (in this case, 'mineral extraction') cannot, without anything more, cause a particular proposal to be inappropriate on the grounds of openness. The mineral extraction development at West Malling Sandpit is proposed to include access roads, movement of HGVs accessing the site, site offices and welfare facilities, mobile plant, screener, stockpiles and screening (bundling and tree planting) all of which can be said to be generally encountered at mineral extraction sites and so are also not automatically considered to be inappropriate development.

4.8 Mineral extraction at the M8 West Malling site would not in my view conflict with the five purposes that the Green Belt seeks to achieve as set out in paragraph 134 of the NPPF and reproduced in paragraph 2.1 above. In respect of the purpose to assist in safeguarding the countryside from encroachment, it is recognised that while the mineral extraction would result in some encroachment, this would be minor in scale in the context of the Green Belt as a whole. It is also recognised that minerals can only be worked where they are found and that the nature of such development means in practice that this type of development takes place in the countryside and, in any event, is specifically recognised as not being inappropriate development within the Green Belt. I therefore consider that there is no overriding conflict from mineral extraction with this aspect of the Green Belt policy test.

4.9 The preservation of openness test is more finely balanced. There is no definition of openness in planning policy. As the case law referred to in Appendix 1 illustrates, the Courts have grappled with the definition and how it is interpreted. In particular this includes:

"The word 'openness' is open-textured and a number of factors are capable of being relevant when it comes to applying it to the particular facts of a specific case". Whilst it is commonly taken to be the absence of built development, openness also has a visual dimension that decision makers must have regard to in planning judgements. Openness considerations can also be influenced by other factors such as the duration of development and the reversibility of its effects, how built up the Green Belt is now and how built up it would be if development were to occur. A realistic assessment of the impact on openness will have to include consideration of both the likely perceived effect on

openness i.e. from visual aspects, as well as the spatial effects of the proposal.

- 4.10 Again, the inclusion of mineral extraction in the list of potential development that can be considered appropriate development supports the view that mineral extraction is capable of meeting the NPPF policy text and that mineral extraction per-se does not automatically mean that such development will impact upon openness such that it is considered inappropriate. To conclude that all mineral extraction is inappropriate would make the policy wording in the NPPF meaningless. Consideration needs to be given on a case by case basis, taking into account the various components proposed in the development. In this case, these are the extraction activity, the bunds proposed to screen the development, access and parking, site offices and welfare facilities, plant, screener and stockpiles.
- 4.11 While the landscape is generally well enclosed, and the predominant effect of development would be to reduce existing ground levels, there is no doubt that due its size (12ha), alien form and longevity (24 years) the mineral extraction and resulting void, i.e. the quarry, could have a significant impact on the area. The effectiveness of any mitigation, in terms of phasing and screening, are unknown and so it is not possible to say with any certainty that the extraction of the mineral will preserve openness.
- 4.12 There is also potential that a negative impact upon openness would arise due to the location and layout of site compound, material stockpiles, processing plant, movement of HGVs accessing the site and screening requirements.
- 4.13 In respect of the site offices and welfare facilities, these would be located within a single storey unit at current ground level. Mobile plant, a screener and stockpiles would also be located at current ground level during the first 6-12 months of the development. It is considered that the offices, welfare facilities, mobile plant, screener and the movement of HGVs accessing the site and parking arrangements would introduce urbanising features into the countryside which would have a negative impact upon openness for the duration of the works – i.e. 29 years. Depending on their height and location, material stockpiles could also impact on openness. Three-metre high screening bunds, together with tree planting, are proposed to mitigate the visual impact of the development for the lifetime of the activities (minimum of 24 years), however it is considered that they will impact upon the openness of the Green Belt for a significant period of time.
- 4.14 In light of the above, it is concluded that mineral extraction proposed at this location would not preserve openness and so would constitute inappropriate development. Inappropriate development is by definition harmful to the Green Belt and should not be approved except in very special circumstances which will not exist unless the potential harm to the Green Belt by reason of inappropriateness and any other harm is clearly outweighed by other considerations.
- 4.15 This conclusion, that the development is inappropriate, is consistent with the position taken by the site promoter: In response to the 'Call for Sites' in 2016, the promoter of the M8 site noted that the site falls within the Green Belt, and, while noting that minerals extraction is not inappropriate development, made a case for very special circumstances as follows:

“The NPPF provides that mineral extraction is not inappropriate in the Green Belt provided it preserves openness and does not conflict with the purposes of including land in the Green Belt. Minerals can only be worked where they are found and the proposed extraction will be a temporary use of the land, followed by restoration. The very special circumstances in this case include that

the minerals are of local and national importance; a proportion is silica sand, which is understood to be nationally scarce'

- 4.16 Whilst the promoter is not specific about the components of the development which trigger inappropriateness, by making a case for the existence of 'very special circumstances', the promoter would appear to recognise, that the development is inappropriate for the purposes of Green Belt policy.

Very Special Circumstances: Harm v Other Considerations

- 4.17 Having concluded inappropriateness, a consideration of whether 'Very Special Circumstances' exists is required which involves an assessment of whether "the potential harm to the Green Belt by reason of inappropriateness, and any other harm resulting from the proposal is clearly outweighed by other considerations".
- 4.18 This assessment is usually undertaken at the planning application stage when further details are known of a proposal and is part of the balancing act of material planning considerations. It is however required at this plan making stage to establish whether the site is acceptable in principle for allocation, given the policy wording of the Kent Minerals and Waste Local Plan and national policy on development within Green Belt.

Harm

- 4.19 In accordance with national policy, when weighing harm against 'other considerations', 'harm' should be taken as "potential harm to the Green Belt by reason of inappropriateness, and any other harm resulting from the proposal".
- 4.20 In terms of harm to the Green Belt caused by reason of the development's inappropriateness, the matter of concern relates to impacts caused by the excavation and resulting void, site compound, material stockpiles, movement of HGVs accessing the site, processing plant and screening requirements.
- 4.21 It is considered that there would undoubtedly be a negative visual impact arising from these aspects of the development, particularly for those properties and footpaths closest to the site, that would affect the perception of openness in this location. The excavation and mineral void, site compound, material stockpiles, movement of HGVs accessing the site and processing plant are all likely to be very prominent in views from properties along Roughetts Road to the east and would also be visible from properties on London Road to the south and Woodgate Road to the north. The visual impact of the excavation and mineral void could be extensive and significant. Depending on the exact location and size of the site compound, material stockpile and processing plant, visual effects on these properties would be adverse and could also be assessed as significant. Similarly, there would be an adverse visual impact experienced by users of the public rights of way affected by the site. Screening is proposed to mitigate visual impacts but, due to the extent of the development, this may not be wholly effective. The screening bunds (at least 3 metres high plus additional planting on top of the bunds) proposed to mitigate the impact of the development for the lifetime of the activities (minimum of 24 years) would by themselves also adversely impact the perception of openness for a significant period of time.

4.22 In establishing the nature and extent of 'any other harm' reference has been made to the detailed technical assessment (DTA) report for mineral development in this location. The DTA includes an assessment of the impacts associated with the following:

- Landscape and the Kent Downs Area of Outstanding Natural Beauty (AONB)
- Biodiversity
- Historic environment
- Water environment
- Loss of grade 3 quality soil
- Local amenity (noise, dust, vibrations and visual impacts)
- Public Rights of Way (PROWs)
- Utilities/services
- Access – impact on highway network
- Air Quality and health
- Need for the mineral
- Land stability

4.23 Cumulative impacts with other developments and quarrying operations within the area have also been considered.

4.24 The DTA does not conclude with any certainty that unacceptable impacts related to the matters above would occur and so it can be concluded that significant harm is unlikely.

Other Considerations

4.25 On the basis of the current information, the following matters are considered to be matters to be weighed as 'other considerations' in the determination of 'Very Special Circumstances':

- a) Need for the mineral
- b) Location of other resources and competition considerations
- c) Duration and reversibility of impacts
- d) Development without those activities that are considered inappropriate for Green Belt consideration
- e) Existence of mineral options outside of the Green Belt to meet need

These matters are considered in turn below.

a) Need for the Mineral

- 4.26 The promoter has identified need for the mineral as a 'Very Special Circumstance' by drawing attention to the fact that the minerals (soft sand and silica sand) are of local and national importance. The promoter asserts that the silica sand element of the reserve is in its highest purity form and is understood to be nationally scarce. It is recognised that the site provides the potential for some 3.1mt of soft sand and a further 0.5mt of silica sand. While Policy CSM2 recognises the need to specifically allocate additional reserves for soft sand in the Mineral Sites Plan, development of silica sand reserves is subject to general planning considerations rather than via site allocations.
- 4.27 Policy CSM2 of the Kent Minerals and Waste Local Plan recognises that the aggregate landbank requirements will be reviewed through the annual Local Aggregate Assessment (LAA). The 2018 LAA provides the landbank and sales data to inform the Minerals Sites Plan requirement over the life of the Plan plus 7 years (18 years). On this basis, the Mineral Sites Plan is seeking to provide 2.5mt provision of soft sand for the life of the Plan.
- 4.28 Following the call for sites, two sites have been promoted and initially assessed as meeting the soft sand requirements. These sites, M8 West Malling Sandpit and M2 Chapel Farm Lenham, have the potential to yield 3.1mt and 3.2 mt of soft sand respectively. Each site therefore has the potential to meet Kent's identified need.
- 4.29 There is a desire from West Sussex County Council and the South Downs National Park Authority for Kent County Council to make additional provision to meet some of their needs, given development constraints arising from the location of the resource within the National Park. It is also noted that the potential for the supply of soft sand from sources in the neighbouring county of East Sussex is extremely limited.
- 4.30 At this time, however there is no evidenced need to demonstrate a case to make significant additional provision in Kent to meet a regional need. Furthermore, it is noted that: Either of the promoted sites has the potential to generate a surplus to meet wider than Kent needs; that East Sussex's needs from Kent are already factored into the LAA derived requirements; and, that prior to the conclusion of West Sussex's and the South Downs National Park Authority's current Soft Sand Review work, it is not possible to conclude that provision for a specific unmet need arising outside of Kent is justified.
- 4.31 West Sussex CC and the South Downs National Park Authority are intending to publish an Issues and Options Consultation to address its soft sand requirements during January to March 2019, with the intention to publish a Regulation 19 proposed Submission Plan in Summer 2019. This work is part of their joint Local Plan Soft Sand Review, following its Inspector's report on the West Sussex Joint Minerals Local Plan in May 2018.

b) Location of other resources and competition considerations

- 4.32 Planning policy and guidance seeks to ensure that in meeting aggregate supply, decisions are not taken that would result in large landbanks bound up in very few sites that stifle competition. In the case of Kent, the latest Local Aggregates Assessment shows that mineral permissions for soft sand exist across the County and are operated by a number of companies. This includes Tarmac Aggregate's site at Sevenoaks Quarry, Ferns Aggregates at Addington, Roger Body at Borough

Green Sandpits, Brett Aggregates at Charing Heath, Ightham Sandpits operated by H&H Celcon, Brett Aggregates at Lenham Quarry and J Clubb's site at Nepicar, Platt.

c) Duration and reversibility of impacts

4.33 Mineral activity is a temporary development, albeit in this case working would span approximately a generation. The intention would be to excavate mineral from the site over a 24-year period with phased restoration. Depending upon materials, the site would be restored back to agricultural use in some 29 years. Unlike other forms of development, at the end of this period, it is proposed that the site would revert to its current landform. There are examples in the vicinity where former mineral sites have been restored back to open countryside. Nevertheless, the harm to the Green Belt caused by the site activities would occur to a greater or lesser extent for a considerable period of time. In particular, the screening bunds, the site compound and the processing plant would be in place during the excavation and subsequent restoration activities.

d) Development without those activities that are 'inappropriate development'

4.34 A potential solution to reducing the impact upon the Green Belt would be to consider whether it is acceptable to carry out the development without those components that trigger inappropriateness. While it might be possible to excavate the mineral without the site compound, material stockpiles, and processing plant (though this is not proposed), the excavation itself is considered to be an element of the mineral extraction that triggers inappropriateness, and as it is an integral part of the development, the development could not proceed without it.

4.35 It should also be noted that the screening bunds would play an essential role in mitigating the visual and amenity impacts of the development, particularly for those properties closest to the activities. It is therefore difficult to conclude that the development would be acceptable without such bunding.

e) Existence of mineral options outside of the Green Belt to meet needs

4.36 As part of a 'very special circumstances' consideration, it is reasonable to consider whether there are alternative solutions that could meet the soft sand requirements in the County. In the absence of alternatives, then the 'very special circumstances' in favour of developing this site within the Green Belt would be strengthened, however, in this case, the County Council has an alternative option which would meet the soft sand need for the county – Chapel Farm, Lenham. This site falls outside the Green Belt and is therefore free from this national policy constraint.

4.37 Furthermore, the detailed technical assessment has concluded that the Chapel Farm site is suitable in principle for development.

Conclusion (mineral extraction)

4.38 Mineral extraction at the West Malling site would not preserve openness and therefore constitutes 'inappropriate development' for the purposes of Green Belt policy. Inappropriate development is by definition harmful to the Green Belt and should not be approved except in 'very special circumstances'. In decision making, local planning authorities are required to give substantial weight to any harm to the Green Belt and that 'very special circumstances' will not exist unless the potential harm to the Green Belt by reason of inappropriateness, and any other harm resulting from

the proposal is clearly outweighed by other considerations.

- 4.39 The potential harm to the Green Belt caused by the mineral extraction would last an estimated 24 years. As there is an alternative site option at Chapel Farm, Lenham that lies outside the Green Belt that meets the soft sand requirements in Kent and is acceptable in principle for mineral development, it is not reasonable to conclude that other considerations clearly outweigh the harm to the Green Belt. As such it cannot be said that very special circumstances exist at this time to override the presumption against inappropriate development within the Green Belt.

Restoration by infilling with inert waste

- 4.40 The restoration of the site to agricultural land by backfilling to existing ground levels using inert waste is considered to be inappropriate development and that 'very special circumstances' will be required to satisfy Green Belt policy. The activity falls outside the mineral extraction activity and engineering operation exemption clauses set out in paragraph 146 (a) and (b) of the NPPF.
- 4.41 This view is consistent with that of the Inspector who, when examining an appeal against refusal of permission for mineral extraction with restoration to agriculture (Pynesfield), concluded that this form of restoration is inappropriate development within the Green Belt, essentially because it is not an integral part of mineral extraction, nor is it an engineering operation for the purposes of paragraph 146 of the NPPF.

Very Special Circumstances: Harm v Other Considerations

- 4.42 As above, having concluded inappropriateness, a consideration of whether 'Very Special Circumstances' exists is required which involves an assessment of whether "the potential harm to the Green Belt by reason of inappropriateness, and any other harm resulting from the proposal, is clearly outweighed by other considerations. This assessment is set out below.

Harm

- 4.43 In assessing the harm resulting from the backfilling operation, it is necessary to establish the impacts and the extent of harm resulting from each of these. The impacts are considered to be related to:
- Highway – those impacts to road users and pedestrians caused by additional HGVs transporting materials to the site (and leaving the site) resulting in congestion on the road network and impacts to the safety of pedestrians and other road users.
 - Amenity and health – nuisance and health impacts to residents, visitors and businesses in the area caused by for example dust and noise resulting from the backfilling activity and transporting materials to and from the site.
 - Landscape and visual impacts – taking account of the location within the setting of the AONB
 - Water environment – hydrology, hydrogeology and flood risk
 - Biodiversity
 - Historic Environment
 - Impacts on Public Rights of Way

- 4.44 With regard to highway impacts, as noted in the Detailed Technical Assessment (DTA), the assessment of transport impacts has indicated that with appropriate routeing arrangements, mineral can be worked from the site without causing unacceptable impacts. It is considered that as the transport associated with the filling activity will be similar, the same conclusion, that in principle there will be no unacceptable impacts can be reached.
- 4.45 In terms of amenity and health, it is considered that the measures proposed to address these issues for the extraction, including screening would also ensure that unacceptable impacts do not occur.
- 4.46 In terms of landscape, the site would be restored to agricultural land at existing levels along with reinstatement of former hedgerows, hedgerow trees and so any harm resulting from the extraction activity would ultimately be mitigated by the filling activity. It is noted that in its response to the consultation on the site options the Kent Downs AONB unit supported the restoration of the site to agricultural land. Such restoration would ensure that views of the site from the AONB to the north are in keeping with the surrounding landscape character.
- 4.47 With regard to visual impacts, it is considered that mitigation of the impacts using screening bunds would incur a visual impact by itself as would the movement of HGVs accessing the site, which would adversely impact on the openness of the Green Belt. However, the infilling activity is estimated to take place over five years and so such impacts would be relatively short-term.
- 4.48 The Environment Agency has noted the intention to restore the site by backfilling and has not raised any in principle objection to this activity in terms of impacts in the water environment including flood risk. Infilling activity involving waste material would require authorisation by the Environment Agency in the form of an Environment Permit and this would further ensure that adverse impacts to the water environment did not arise.
- 4.49 With regard to biodiversity, restoration of the site to existing ground levels would not cause further impacts and could result in enhancements for example by replanting hedgerows.
- 4.50 In terms of impacts on historic environment, the DTA notes the presence of certain heritage assets but concludes that adequate mitigation could be employed to avoid unacceptable impacts.

Restoration of the site would take five years and impacts on the PROW crossing the site would remain during this period, however, restoration to existing ground levels would allow the PROW to be reinstated.

Other Considerations

- 4.51 On the basis of current information, the following matters are considered to be matters to be weighed as 'other considerations' in the determination of 'very special circumstances':
- a) Benefits of restoring the mineral excavation to agricultural land at existing ground levels including replacement of existing features such as hedgerows
 - b) Need for management of inert waste by infilling
- 4.52 These matters are considered in turn below.

a) Benefits of restoring the mineral excavation to agricultural land

The restoration of the site in the manner proposed would result in a number of benefits as follows:

- amelioration of landscape and visual impacts
- reinstatement of existing Public Rights of Way (PROWs)
- amelioration of biodiversity impacts caused by extraction with potential for net gains in biodiversity

b) Need for management of inert waste by infilling

- 4.53 Materials resulting from excavation associated with other forms of development frequently require management off site and the infilling activity would provide an opportunity for such management. However, the Kent Minerals and Waste Local Plan notes that there is surplus capacity of the disposal of inert waste within Kent and so, while this activity could provide for a more convenient outlet for such wastes arising locally, overall there is no explicit need for the additional capacity.

Conclusion (Restoration by infilling with inert waste)

- 4.54 The activities associated with the restoration by infilling with inert waste are considered to be inappropriate development within the Green Belt. Inappropriate development is by definition harmful to the Green Belt and should not be approved except in very special circumstances. In decision making, local planning authorities are required to give substantial weight to any harm to the Green Belt and note that very special circumstances will not exist unless the potential harm to the Green Belt by reason of inappropriateness, and any other harm resulting from the proposal is clearly outweighed by other considerations.

- 4.55 The harm to the Green Belt caused by the inappropriate development is assessed as that relating to visual impacts related to openness caused by screening bunds and movement of HGVs accessing the site, however these would be temporary (approximately five years). There is no evidence that other impacts would result in significant harm. Significant benefits would result from the restoration activity which are considered to clearly outweigh the short-term harm and so it is considered that very special circumstances exist to override the presumption against inappropriate development within the Green Belt.

Overall Conclusion

- 4.57 Restoration of the mineral working by infilling to existing ground levels would constitute inappropriate development but it is considered that very special circumstances exist to override the presumption against inappropriate development within the Green Belt. However, due to its detrimental impact on the openness of the Green Belt, the mineral extraction activity also constitutes inappropriate development and, by virtue of the fact that the need for the development

(supply of soft sand) could currently be met at an alternative suitable site outside of the Green Belt, it is considered that very special circumstances to override the presumption against inappropriate development in the Green Belt do not exist and allocation of this site in this location would therefore be inconsistent with local and national Green Belt policy.

Green Belt Prevailing Case Law

- 1 The most recent and pertinent case law relevant to this assessment, is the March 2018 Court of Appeal decision in the case of **R (Samuel Smith Old Brewery (Tadcaster) and Oxtan Farm) v North Yorkshire County Council and Darrington Quarries Ltd [2018] EWCA Civ 489**. The case involved a challenge to a planning permission for a 6-hectare quarry extension in the Green Belt at Jackdaw Crag Quarry. The development would lead to an increase in the existing quarry area of approximately 24% and produce around 2 million tonnes of crushed rock over a period of 6-7 years.
- 2 In that case the applicant (Darrington Quarries Ltd) did not justify the development on the basis of there being 'very special circumstances' for the purposes of paragraphs 87 and 88 of the 2012 NPPF but contended that the proposal came within the 'mineral extraction' exception under paragraph 90, and was therefore not 'inappropriate development in the Green Belt'.
- 3 The officer's report to committee concluded that, when considering applications within the Green Belt, it is necessary to consider whether the proposed development would firstly preserve the openness of the Green Belt and secondly not conflict with the purposes of including land within the Green Belt. The officer concluded that openness is not defined but is commonly taken to be the absence of built development. Because the application site abutted an existing operational quarry, it would not introduce development of a scale considered to conflict with the aims of preserving the openness of the Green Belt. She concluded that proposed screening could protect the environment and residential receptors from potential landscape and visual impacts, and the restoration of the temporary quarry and the fact the proposal doesn't conflict with the aims of the Green Belt, meant that it would not materially harm the character and openness of the Green Belt.
4. The Appellant, Samuel Smith Old Brewery, challenged the permission, contending the Council had fundamentally misconstrued and misapplied paragraph 90 of the 2012 NPPF [now para. 146] including by failing to take into account visual impacts when considering whether a proposal would 'preserve the openness of the Green Belt' for the purposes of the proviso of paragraph 90. In the High Court, Justice Hickinbottom accepted that the Council had failed to take visual effects into account in the context of potential impacts on openness, but dismissed the claim on the basis that the Council had not been legally required to do so (or alternatively that had such effects been taken into account, the conclusion the openness would be preserved would have been the same).
- 5 The Appellant appealed and the Court of Appeal allowed their appeal. Lord Justice Lindblom held that:

"...when the development under consideration is within one of the five categories in paragraph 90 and is likely to have visual effects within the Green Belt, the policy implicitly requires the decision-maker to consider how those visual effects bear on the question of whether the development would 'preserve the openness of the Green Belt'. Where that planning judgement is not exercised by the decision maker, effect will not be given to the policy. This will amount to a misunderstanding of the policy, and thus its misapplication, which is a failure to have regard to a material consideration, and an error of law."

6 Lord Justice Lindblom went on to find that it was clear that the Council had committed such an error in this case. The Council had limited its consideration of the effects of the development on the openness of the Green Belt to spatial impact and nothing more, despite the fact that, on the Council's own assessment of the likely effects of the development on the landscape, visual impact on openness was 'quite obviously' relevant to its effect on the openness of the Green Belt.

7 Previously, the Courts have grappled in some detail as to the meaning and effect of the policy in Paragraph 90 (now Paragraph 146). In **Europa Oil and Gas Ltd. V Secretary of State for Communities and Local Government [2013]** EWHC 2643 Justice Ouseley concluded that;

"...as Green Belt policies NPPF 89 and 90 demonstrate, considerations of appropriateness, preservation of openness and conflict with Green Belt purposes are not exclusively dependent on the size of building or structures but include their purpose...one factor that affects appropriateness, the preservation of openness and conflict with Green Belt purposes, is the duration of development and the reversibility of its effects...minerals can only be extracted where they are found..."

8 In **Timmins and another v Gelding Borough Council [2014]** EWHC 654, Justice Green said that;

"...any construction harms openness quite irrespective of its impacts in terms of its obtrusiveness or its aesthetic attractions...there is a clear conceptual distinction between openness and visual impact...it is wrong in principle to arrive at a specific conclusion as to openness by reference to visual impact."

9 In **R (on the application of Lee Valley Regional Park Authority) v Epping Forest District Council [2016]** EWCA Civ 404, when referring specifically to the broad and basic statement of national Green Belt Policy, with emphasis on the "essential characteristics of the Green Belt" as

... "openness and their permanence" Lord Justice Lindblom said that; "...the concept of 'openness' means the state of being free from built development, the absence of buildings – as distinct from the absence of visual impact."

10 In **Goodman Logistics Developments (UK) Ltd v Secretary of State for Communities and Local Government and another [2017]** EWHC 947 the planning inspector, on appeal, found that development, simply by its physical impact, would have a significant adverse impact on the openness of the Green Belt. Having reached that conclusion, the inspector said that an assessment of the visual impact of the development was not relevant to the assessment of the impact of openness. The developer appealed, and the question for the court was whether the visual effect of development could be taken into account as reducing the harm that development would cause to the openness of the Green Belt. The judge in that instance decided that visual harm and/or perception was an "obviously material" consideration and that the perceived effect upon openness could be less than might be expected because, for example, the development would have a limited effect upon people's perception of openness from beyond the boundary of the site.

- 11 Important to understanding the extent of what is capable of being relevant to openness, in **Turner v Secretary of State for Communities and Local Government [2016]** EWCA Civ 466 Lord Justice Sales summed up the concept of openness in the following terms:

“The concept of ‘openness of the Green Belt’ is not narrowly limited to the volumetric approach suggested by [counsel]. The word ‘openness’ is open-textured and a number of factors are capable of being relevant when it comes to applying it to the particular facts of a specific case. Prominent among these will be factors relevant to how built up the Green Belt is now and how built up it would be if redevelopment occurs...and factors relevant to the visual impact on the aspects of openness which the Green Belt presents. The question of visual impact is implicitly part of the concept of ‘openness of the Green Belt’ as a matter of the natural meaning of the language used in para 89 of the NPPF [2012]...There is an important visual dimension to checking ‘the unrestricted sprawl of large built-up areas’ and the merging of neighbouring towns, as indeed the name ‘Green Belt’ implies. Greenness is a visual quality...Openness of aspect is a characteristic quality of the countryside, and ‘safeguarding the countryside from encroachment’ includes preservation of that quality of openness.”

- 12 **In the appeal decision (APP/M1900/A/14/2218970)** for mineral extraction and restoration to agriculture at Pynesfield, Maple Cross, Rickmansworth, the Inspector concluded that the infilling of the mineral void was inappropriate development. The decision recognised that the openness of the green belt would be preserved by the infilling activity and that it shared some characteristics with ‘engineering operations’, but it did not fall within this definition, nor that it was an integral part of mineral extraction. Whilst clearly consequent upon the extraction, the operation was necessitated by the chosen restoration strategy rather than the extraction itself.

Appendix 3 - Ryarsh Protection Group representation to Kent County Council, November 2018 - West Malling Sandpit (M8)



WHY RYARSH IS AN INAPPROPRIATE LOCATION FOR THE PROPOSED M8 QUARRY DEVELOPMENT



Photo: May 2018 – Public footpath leading through the undisturbed ancient woodland, identified as ‘The Roughetts’ in Ryarsh. All access to this tranquil area would be cut off and damaged if the proposed site were to be developed.

INTRODUCTION

The Ryarsh Protection Group (RPG) is an action group working alongside Ryarsh Parish Council and surrounding communities. It exists to help residents and local communities with local issues. Currently, the priority is to focus objection on the proposed site M8, also known as ‘West Malling Sandpit’ and ‘Ryarsh Quarry’.

This report which has been produced for the benefit of all stakeholders, including Kent County Council (KCC), and presents 32 justifications as to why the proposed M8 site is unsuitable for a sandpit/quarry. It has been compiled following discussions with residents and local communities. Further information has been sought from experts within their field.

WHY RYARSH IS UNIQUE AND AN INAPPROPRIATE LOCATION FOR THE M8 QUARRY DEVELOPMENT

1. The proposed site is located in the **centre of an ancient Saxon village** and community, situated very close to homes, three schools, four churches, three public houses/restaurants and other public establishments.



Photo: Duke of Wellington, Ryarsh – Originating circa 1516, this public house is a historical landmark

2. The quarry would seriously impact the local community and will have a detrimental effect on the everyday lives of residents and visitors - including **severe impact to their health and wellbeing.**

3. The proposed site is **adjacent to the Kent Downs, an Area of Outstanding Natural Beauty** (AONB).
4. The proposed site is on **elevated landscape**. A quarry would **destroy the openness of this landscape** and would be seen for miles around, including from the Kent Downs AONB.
5. The proposed quarry would be seen and heard from popular **walking routes including Pilgrims Way and North Downs Way** located on the North Downs ridge, blighting the surrounding area. The noise generated from quarry activities would impact these amenities. Recent studies show the **cumulative impact** of such noise, including that from the adjacent M20 motorway, has a detrimental impact on general health and wellbeing.
6. The quarry and its services – lights, noise, dust, fumes and vibration, etcetera, are adjacent to the locally and nationally important M20 motorway. The M20 is a major entry route into the UK by tourists and businesses from Europe, and forms part of European Route E15. If positioned here, the quarry operations will have a **huge visual impact on the Ryarsh environment and on the landscape character**. This applies even if a bund or mound is constructed around the site. The visual impact cannot be mitigated by earth constructions to disguise a huge quarry.
7. The proposed site is sandwiched in **between two major roads of both national and local importance**, the M20 and A20. Both of which already cause significant noise pollution, air quality and traffic issues for the Ryarsh community.
8. Ryarsh and its residents have compelling first-hand experience of repeated **breaches of operational procedures** by sandpit operators and although the operators may subsequently be fined, they often continue to disregard restrictions to the detriment of residents.



Photo: February 2018 – Residents were left devastated when a large number of trees were completely removed along the borders of the M20, causing many to have sleepless nights from the increased noise levels. The proposed quarry site is adjacent to this section of the motorway, with the AONB to the right. Two Emergency Refuge Areas (ERA's) are currently under constructed either side of the M20 at this location, bordering site M8.

9. Residents in Ryarsh that live near the motorway are **already exposed to shockingly high levels of consistent noise pollution**. The Environmental Study Report, conducted by Jacobs Atkins for the M20 Smart Motorway Programme in February 2017, revealed that numerous properties are subject to daytime noise levels in excess of 70 decibels (dB). These noise measurements were taken prior to the extensive tree removal which provided a natural sound buffer. The World Health Organization and the European Environment Agency report that anything above 55dB severely impacts health and wellbeing. Areas either side of Roughetts Road overbridge are also identified by the Department for Environment, Food & Rural Affairs (DEFRA) as Noise Important Areas. A quarry within the boundaries outlined by site M8 would expose these same residents to additional noise pollution and disruption.

The readings show an average decibel reading at Roughetts Row of 73dB over an

18-hour period. It also details that Roughetts Road on the coast bound carriageway endures 76dB on average over an 18-hour period.

The European Environment Agency when quoting the World Health Organization, state that *“During the night, high outdoor noise levels can cause sleep disturbance, such as body movements and wakening, starting at levels below 40dB, and with effects on the cardiovascular system that become apparent above 55dB. All these impacts can contribute to premature mortality”*.

Approving a noisy development such as a quarry, knowing that residents in proximity of both the M20 and the proposed M8 site are already blighted by noise above and beyond acceptable levels, would be considered negligent.

10. The road bordering the proposed site, namely **Roughetts Road, is narrow**. Lorries will have little option but to mount the pavement. **Access onto the A20 is uphill with heavy lorries accessing from a standing start**. Joining the A20 traffic under these circumstances is fraught with difficulty, especially in the darker winter months – see recent incident below:
 - a. 20 September 2018 – A20/Hawley Drive – Serious road traffic collision causing 2-hour delay.



Photo: 20 September 2018 - A20 / Hawley Drive accident



Photo: July 2018 – Ryarsh resident captures the moment three articulated lorries encountered another travelling in the opposite direction on the narrow roads of Workhouse Road and Park Farm Road.

11. There is already **substantial traffic pressure** on the surrounding area with the dramatic increase of large, heavy vehicles. With the recent approval of a refrigeration unit on Birling Road, additional HGV's are already accessing our local small roads.

12. The proposed site has **prevailing south-westerly winds and is positioned on higher ground** – the noise and air pollution, including silica dust, would be blown across the community, including Ryarsh Primary School, Ryarsh Park and Leybourne Chase. In the absence of baseline dust measurements the photo on the right provides evidence as to the amount of detectable pollution that is currently airborne in and around site M8. This vehicle pictured was parked on the boundary of the proposed site for one week.

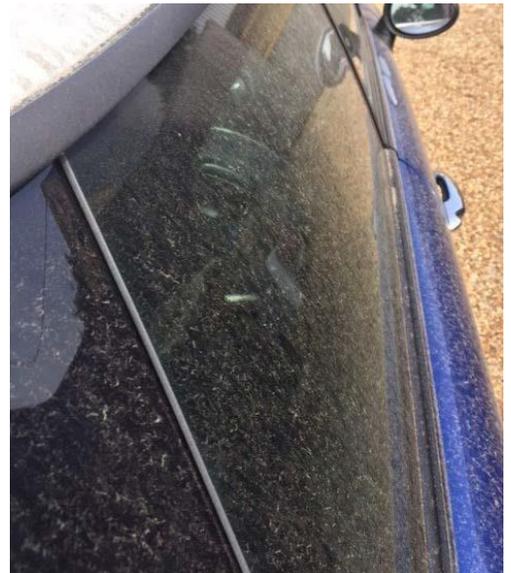


Photo: July 2018 - Layer of dust adhered to a car parked for one week on the boundary of the proposed site.



Photos: May 2018 - Resident encounters multiple quarry vehicles along the narrow lane of Woodgate Road and Trottscliffe Road with dust being made airborne and taken by the wind. This is now a regular occurrence.

13. It is possible that the community is already impacted by pollution from the M20 and a new proposed quarry would only exacerbate this. As advised by Professor Frank Kelly, of King's College London, the Ryarsh Protection Group requested Kent County Council to undertake baseline particulate pollution measurements to establish the current ambient particulate matter (PM) concentrations in the community. If they are near any of the World Health Organization recommended limits, then the likelihood that the increased dust load from the quarry activity and/or lorry emissions transiting to, and from the quarry will push the particulate matter concentrations above these limit values.

At this time, the RPG have not received an update from Kent County Council on this subject – which was requested 9 April 2018.



Photo: May 2018 – Ancient trees and woodland are located within the proposed quarry boundaries

14. **The quarry would remove key public rights of way, restricting access** to and between the Kent Downs and the ancient woodland, 'The Roughetts'. These are precious amenities that residents and visitors rely on as the only walking routes linking the communities of Addington, Ryarsh, Ryarsh Park, Birling, Leybourne Chase and into West Malling. Ramblers, dog walkers and the like, will be forced to go elsewhere to enjoy open green landscape and to exercise and relax near their homes. This would lead to more car journeys, compounding stress for residents and visitors. These footpaths and the amenity they provide will be lost forever.

15. **Ancient woodland** and 'The Roughetts' are within the proposed quarry boundaries. The quarry would remove the opportunity to visit the untouched land and woodland. **This land would never be the same again.**

16. Additional **ancient trees** are located within the proposed site.
17. The proposed site and areas surrounding it are home to an **abundance of wildlife** such as species of newts, bats and owls, dormouse and buzzards. Sightings of deer and wild boar on the site have also been reported.
18. Disturbance of the untouched land could **contaminate the aquifer**. Local water flows into the brook close to the site which could impact wildlife and biodiversity downstream. Widely documented research on silica sand found in streams and brooks showed that it has the potential to kill marine wildlife.
19. **Aquifer and water table levels are high in this location**. Extracted sand may require processing on site – additional machinery required, would generate even more noise, dust, vibration, light and disruption.



Photo: April 2018 - The burst brook positioned south of site M8



Photo: April 2018 - Stagnant water on site M8

20. **Commitments made to our communities** during the original planning stages are **often amended and are perceived to favour the site operator**. The nearby Wrotham Quarry which is similar to the M8 proposal, has recently expanded their boundary, including going under roadways in order to obtain greater access. Another nearby quarry is currently being targeted for future housing under the Borough Green Garden City project, instead of the open green space restoration that was originally promised.

21. The cumulative impact and **disproportionate burden placed on the community from previous and current developments** is unreasonable, such as: quarries, landfills, the brickworks factory, creation of the M20 (subsequently splitting the village and community), the collapse of East Street bridge and delay of its reinstatement, the current M20 Smart Motorway construction works with two emergency refuge areas, a local existing quarry 800 metres away and other nearby developments. Ryarsh and the wider community should not have to suffer from what is clearly disproportionate burden.

22. **The site is close to historically significant buildings** including St. Martins Church which dates back to the Norman era, listed buildings and the home where a translator of the Doomsday Book once lived.

23. Ryarsh is a **unique Kent village and has a hard working, vibrant community whose residents contribute greatly to its success**, a fact Kent County Council can be proud of. The village:

- a. Dates back to Saxon times.
- b. Residents understand and respect the M20 that splits their village.
- c. It has embraced two new developments, Ryarsh Park and Leybourne Chase, which are intrinsically linked to the ancient parts of the village via the public footpaths and roads.
- d. Ryarsh residents contribute hugely to the wider economy.



Photo: March 2018 – St. Martin's Church in Ryarsh located just a few hundred metres from the proposed site. Public footpaths link the surrounding villages and the new developments; Ryarsh Park and Leybourne Chase, to the church.



Photo: February 2018 – Public footpath MR152 from Roughetts Road. This section of the footpath links Birling, Ryarsh, Ryarsh Park, Leybourne Chase, passed St. Martin's Church with the neighbouring village of Addington and beyond. Development of site M8 would bring an end to the connection between these communities.



Photo: February 2018 – The community congregated to demonstrate their firm opposition to the M8 proposal

24. Unanimous objection to the proposed M8 development has been lodged with Kent County Council by all local parishes including, Ryarsh Parish Council, Birling Parish Council, Addington Parish Council and Leybourne Parish Council, and over 1266 individual objections. Ryarsh residents have made clear their total objection to this quarry by their determination in writing letters of objection and organising public events designed to demonstrate their opposition to having a quarry in the midst of their community.

25. Thoroughly detailed letter of **response from our MP Tom Tugendhat urging KCC to reconsider** the proposal and the impact on the wider community:

“With a long history of quarrying in Ryarsh, I would be grateful if Kent County Council would look closely at the numerous issues which come into question regarding this site”

“I cannot emphasise enough how this issue has engaged the community and I hope that this will be recognised by Kent County Council”

– Tom Tugendhat MP
7 February 2018

26. The Ryarsh Protection Group believe the **environmental reports** produced by the site’s promotor have not been executed correctly and are therefore **not fit for purpose**:

a. The mats supposedly for the use of carrying out fauna investigations, were discovered draped over fences around the site.



b. The noise monitoring survey conducted by contractors on behalf of the sandpit promotor was also

flawed. MP Tom Tugendhat requested assurance that Kent County Council would not apply great weight to the results:

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icing*

“I am concerned that this equipment, however well intentioned, will not be able to provide a fair analysis of the noise situation in Ryarsh and shall provide evidence which can be easily challenged should KCC look to use it as part of its evidence base. I’d like your assurance in this regard that you won’t be applying great weight to its results”

– Tom Tugendhat MP
3 August
2018

27. Kent has an abundance of sand according to KCC. The RPG **encourage KCC to seek alternative sites, away from homes, schools and village communities.**

28. **Ryarsh is being sacrificed** because unlike other parts of the south east, such as Sussex and Surry, Kent does not enjoy national park status even though sand baring typography is similar.

Site	Estimated Workable Reserve
Chapel Farm, Lenham	4mt
West Malling Sandpit, Ryarsh	3.1mt

2.12 These sites would provide a surplus of around 5mt over the Plan period. This 'surplus' is necessary as it would give flexibility to account for: sites not coming forward as anticipated; yields being lower than anticipated, or demand increasing over the Plan period. Furthermore, the adopted KMWLP recognises that soft sand supplies in Kent are relatively abundant, whereas they are scarce in other parts of the south east of England⁵ and so additional reserves may help meet increasing demand in other areas and potential for export of materials to serve wider soft sand markets. This may become increasingly the case in the South East as soft sand resources are limited in distribution and potentially constrained by protective designations, such as National Parks.

Image: Point 2.12 of Kent County Council's Minerals and Waste Local Plan indicating Ryarsh would "provide a surplus".

29. **A quarry would provide no benefits**, economic or otherwise, to the community - the development would only benefit the quarry operator and two land owners at the expense of residents and the local community.

30. The recent introduction of the **M20 Smart Motorway Programme has occurred due to the increased quantity of traffic** using this major road. The scheme will result in a permanent running lane being created from the current hard shoulder on either side. **Ongoing maintenance will be required on the M20**, adjacent to the proposed M8 site. This maintenance would be taking place throughout the life of the proposal. These simultaneous activities would place significant pressure on the rural area.

31. Residents are extremely concerned about **increased pollution from slow-moving vehicles**. The World Health Organization (WHO) has placed outdoor air pollution among the top ten health risks faced by humans, linking with seven million premature deaths a year. WHO classified outdoor air pollution as being carcinogenetic to humans in 2013, as smoking was in 1985. Pollution levels inside

cars were found to be up to 40% higher while in traffic jams or at a red traffic light compared to free-flowing traffic conditions.

Additionally, residents are concerned with **traffic delays** and **congestion on local infrastructure**, especially roads being unable to cope with current demand that impact home and business life. Recent examples include:

- a. 4 October 2018 – M20 J4-5 – Serious road traffic collision causing 2-hour+ delay. Caused traffic to use surrounding roads including A20 and local roads such as Roughetts Road and Offham Road.
- b. Potential risk of increased M20 congestion and pollution resulting from Operation Brock (M26), Operation Stack (M20) and Brexit.



Photo: 4 October 2018 – View of Offham Road / A20 junction traffic build up from M20 accident



Photo: 4 October 2018 - A20 / Roughetts Road congestion causing two hour + delay



Photo: 4 October 2018 – View of M20 gridlock from Roughetts Road overbridge. Disruption causes congestion on A20 & surrounding roads

32. A recent article published on the front-page of **The Times**, **19 September 2018** - ***“Living in a polluted area increases the risk of dementia by up to 40 per cent, the first British study of its kind has found. Polluted air is known to cause lung and heart problems as tiny soot particles and chemicals such as nitrogen dioxide (NO₂) pass deep into the body. Research is also increasingly linking traffic fumes to thinking problems. Last year a Canadian study of 2.2 million people concluded that those who lived continuously near a busy road were 12 per cent more likely to get dementia. Professor Frank Kelly, of King’s College London, senior author of the study said it was “very likely that high air pollution alone does not cause dementia but rather it increases the risk of an individual developing it”.***



Photo: February 2018 – Local children created a banner using their own initiative to display their disapproval to the proposal as it is their future

CONCLUSION

The Ryarsh Protection Group appreciate Kent County Council’s obligation to provide for a ‘need for sand’ within the local plan. We urge KCC to seek sites away from homes, schools and public buildings with reduced impact on residents and businesses.

Ryarsh and its neighbouring areas support an incredible community, which over the years has embraced significant change; most recently through new developments in Ryarsh Park, Leybourne Chase and the M20.

The cumulative impact of previous works has seen a disproportionate burden placed on the community. The proposed location of the M8 quarry in the immediate vicinity of homes, schools and public buildings would have a serious and detrimental effect on the everyday

lives of residents and visitors, impacting their health and wellbeing. As Professor Dame Sally Davies, England's Chief Medical Officer, highlighted in her report of March 2018 "*People are being exposed to a daily cocktail of pollution that may be having a significant impact on their health*".

The project would further destroy the openness of the landscape, in close proximity to the Kent Downs, Area of Outstanding Natural Beauty. Access to this amenity, including public rights of way, would be removed and lost forever.

We respectfully request that decision makers within Kent County Council consider the enormous, negative effect this project will have on our village and surrounding communities whilst noting the universal condemnation our residents have submitted in objection to this proposal.

October 2018



Appendix 4 – Natural England’s Advice to KCC - Lydd Quarry

(M2)

Date: 10 October 2018
Our ref: DAS/2340/255496

Dear Alice Short

Discretionary Advice Service (Charged Advice) Contract reference: 3890 Development proposal and location: Extension of Lydd Quarry, Lydd, Kent

Thank you for seeking advice under Natural England’s Discretionary Advice Service for the above proposal. Kent County Council has sought advice on:

- Advice in relation to impacts and mitigation measures that may result from the proposed allocation of Lydd Quarry within the partial review of the Kent Minerals and Waste Plan to the Dungeness, Romney Marsh and Rye Bay Site of Special Scientific Interest (SSSI), Special Protection Area (SPA) and Wetland of International Importance under the Ramsar Convention (Ramsar Site)
- In addition, during the meeting, it was agreed that this advice note would also include initial advice on the scope of the Appropriate Assessment to accompany the Minerals Plan submission.

This advice is provided in accordance with the Quotation dated 15 August 2018 which was signed on the 10 September 2018. The advice within this letter is based upon the following:

- Meeting with Alice Short and Bryan Geake (Kent County Council), Ian Blake (BPP Consulting), Rachel Barker (Ecus Ltd), Jo Dear and Sean Hanna (Natural England) on the 19 September 2018
- Preliminary Assessment of Potential Hydrogeological and Hydrological Impacts Report (prepared by SLR dated September 2018)
- An outline written scheme of investigation for a programme of geoarchaeological and geomorphological work prior to and during quarry operations at Lydd Quarry, Kent (prepared by Archaeology South East dated September 2018)
- Email from Rachel Barker (Ecus Ltd dated 20 September 2018)
- Email from Bryan Geake of Kent County Council dated 25 September 2018

Impacts to the designated sites

I understand from Bryan Geake’s email dated 25 September that the Council has a 7.8 year landbank of sand and shingle which exceeds the seven year minimum required by the National Planning Policy Framework (NPPF). This email also highlighted that in addition to this 7.8 year supply, there are ‘others [sites] (Lydd being one of them) in the pipeline as potentially acceptable sites’.

Paragraph 204(f) of the NPPF requires minerals plans to:

‘set out criteria or requirements to ensure that permitted and proposed operations do not have unacceptable adverse impacts on the natural and historic environment or human health, taking into account the cumulative effects of multiple impacts from individual sites and/or a number of sites in a locality’

In addition, Paragraph 205(b) of the NPPF states minerals authorities when considering applications should

‘ensure that there are no unacceptable adverse impacts on the natural and historic environment, human health or aviation safety, and take into account the cumulative effect of multiple impacts from individual sites and/or from a number of sites in a locality’

The NPPF also states in Paragraph 175 that

‘When determining planning applications, local planning authorities should apply the following principles:

- a) if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;
- b) development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest’

The Spatial Vision for Minerals Planning in Kent detailed within the adopted Kent Minerals and Waste Plan 2013-30 states that:

‘Throughout the plan period 2013-2030, minerals and waste development will:... Embrace the naturally and historically rich and sensitive environment of the plan area and ensure that it is conserved and enhanced for future generations to enjoy.’

The adopted Plan also states that:

‘Planning for minerals in Kent will: ... Facilitate the processing and use of secondary and recycled aggregates and become less reliant on land-won construction aggregates.’

As we discussed during our meeting, the extraction of minerals will result in the direct loss of the geomorphological interest from this area of the Dungeness, Romney Marsh and Rye Bay Site of Special Scientific Interest. Ditch and other wetland habitats from within the SSSI, SPA and Ramsar Site are also likely to be directly impacted as a result of this proposed minerals allocation (although understandably the detailed working proposals have yet to be finalised so the full extent of the impacts is not yet known). In addition to these direct impacts, based upon the best currently available information, there are potential indirect impacts to the wetland habitats surrounding the proposed allocation site from changes to the hydrology (including saline incursion), water quality and availability together with loss of supporting land for species associated with the SPA and Ramsar Site and the issue of disturbance are also likely to result from the proposal.

Given the significant direct and indirect impacts that this allocation would have for the designated sites, the Council needs to undertake a full and independent consideration of whether there are alternative sites or sources of material which will avoid or result in lesser environmental effects. As mentioned above the Council have confirmed that there are other sites in the pipeline in addition to Lydd Quarry, yet, no further details have been provided as to whether these are also being progressed or whether these would provide sufficient mineral resource for the lifespan of the Plan. I note that the Sustainability Appraisal¹ accompanying the adopted Minerals and Waste Plan confirms in Section 10.1.1 that ‘There is a widespread availability of alternatives to sharp sand and gravel in Kent including marine dredged aggregates and secondary/recycled aggregates’ suggesting that the allocation of Lydd Quarry is not necessary to maintain the mineral landbank; a

position that appears to also be supported in the email from Bryan Geake dated 25 September 2018.

The proposed allocation of Lydd Quarry would appear to be contrary to the NPPF since the Council's own documents confirm there are alternative sources to meet the demand. The allocation would also appear contrary to Policy CSM1 of the adopted Minerals and Waste Plan since Paragraph 177 of the NPPF confirms that 'the presumption in favour of sustainable development does not apply where development requiring appropriate assessment because of its potential impact on a habitats site is being planned or determined.' Policy CSM2 of the adopted plan also confirms that alternative sources will be able to meet the demand by stating that if additional sites are not brought forward 'Demand will instead be met from other sources, principally a combination of recycled and secondary aggregates, landings of MDA, blended materials and imports of crushed rock through wharves and railheads. The actual proportions will be decided by the market'.

During our recent meeting, you sought comments from Natural England on the report prepared by the site promoter, Brett Aggregates, on the needs and alternatives to the Lydd site being promoted. As Jo and I explained during the meeting, we consider the Council should undertake its own independent, impartial and comprehensive assessment of alternative sources of minerals as part of the Minerals Plan review and we would be pleased to provide advice on this once it is available. It appears from the information within the Sustainability Appraisal for the adopted Plan that much of this information may already be available. This assessment should include alternative land based sites and alternative sources such as recycled material and marine won material (in accordance with the approach detailed within Policy CSM2 of the adopted Plan). This assessment should include landscape, nature conservation and geological conservation interests in addition to the socio-economic impacts. Without such an assessment, the Minerals Plan may be unsound if it is not in accordance with the NPPF.

Mitigation measures

During our meeting, and the subsequent email from Bryan Geake of the 25 September, we discussed the 'mitigation' measures suggested by the site promoter for the geomorphological interest within the SSSI at Lydd Quarry. Given the permanent direct loss of the buried (and in part surface) geomorphology, the proposed 'mitigation' in the form of an investigation of deposits prior to extraction to me does not appear to be mitigation since it does not reduce the severity or impact of the mineral removal, it merely provides a limited record of the deposits and prevents any future study of the area.

The proposed geomorphological survey detailed within the outline written scheme of investigation appears similar to the approach undertaken for the previous extraction of minerals at Lydd Quarry. However, as Jo and I explained during our meeting, these previous phases had extant permission at the time the SSSI was notified. This current proposal does not benefit from any permission, allocation or safeguarding and as such the implications of the site allocation need to be fully considered in light of the impacts to the designated sites and the requirements of the NPPF. This geomorphological investigation proposed as 'mitigation' should very much be considered as a last option once all alternative sources of securing the mineral need have been fully exhausted in accordance with the 'avoid, mitigate, compensate' hierarchy of the NPPF and Policy CSM2 of the

¹ http://www.kent.gov.uk/data/assets/pdf_file/0016/15415/Kent-Minerals-and-Waste-Plan-2013-30-Sustainability-Appraisal.pdf

adopted Minerals and Waste Plan. Should the Council, having undertaken the assessment of alternative sources of material (and also undertaken its appropriate assessment in relation to the SAC, SPA and Ramsar Site), allocate the site and this is confirmed by the Plan Inspector, then it is likely Natural England would expect a detailed 'rescue and record' strategy to be secured. The detail of this would need to be agreed ahead of the mineral works commencing rather than at this

stage as advances in technology may provide new opportunities that are not currently available.

Notwithstanding the above, I would advise that the 'mitigation strategy' for the geomorphological interest within the SSSI should not be considered as a justification for allocating Lydd Quarry for mineral extraction when the Council's own documents supporting the adopted Minerals and Waste Plan and more recently the email from Bryan Geake confirm that there are alternative sources which avoid the direct impacts to the SSSI.

In addition to the concerns regarding the loss of the nationally important geomorphology from this proposed site, based upon the currently available information significant ecological impacts to the designated site are also likely to result. Such impacts may result from:

- Direct loss of habitat from the SPA and Ramsar Site from the allocations around Lydd town
- Changes to the hydrology of the wetlands within the SSSI, SPA and Ramsar Site as a result of changes in land form and/or dewatering activities which could have implications for the availability of water within the ditches and other waterbodies, including low lying ground prone to flooding in winter within the designated sites
- Changes to the salinity of water bodies as a result of altered hydrological regimes
- Impacts to species associated with the SSSI, SAC, SPA and Ramsar Site as a result of direct habitat loss, changes to hydrology and salinity
- Direct and indirect impacts to land supporting species associated with the SPA and Ramsar Site which are out with the boundary of the sites (often referred to as supporting habitat or functionally linked land)

Scope of the appropriate assessment

Following our meeting on the 19 September 2018, Rachel Barker kindly sent through a proposed scope of the appropriate assessment to accompany the formal minerals plan consultation. Given the potential for direct and indirect impacts to the SPA, SAC and Ramsar Site the allocation will result in a likely significant effect and as such an appropriate assessment of the plan will be required. In my opinion, the scope of the broad scope of appropriate assessment proposed by Ecus Ltd in their email of the 20 September appears to be acceptable. I would however recommend that additional considerations should also be scoped in - for ease I have copied the scope recommended

by Ecus Ltd below and included my suggested additions in italics.

Description of designated sites screened in for LSE as a result of Lydd Quarry and Allens Bank:

- Dungeness, Romney Marsh and Rye Bay Special Protection Area (SPA) and Wetland of International Importance under the Ramsar Convention (Ramsar Site)
- Dungeness Special Area of Conservation (SAC)

Description of proposed/likely activities at Lydd Quarry and Allens Bank:

- Tonnage and area (m²) of extraction and likely habitats at these areas (link to habitats and species below)
- De-watering process and footprint (scale, timing and duration)
- Wet-working process and footprint (scale, timing and duration)
- Access to and from the Areas and likely number of movements
- Lighting (if any)
- Anticipated noise levels
- Description of characteristics of any other existing/proposed activities that could result in in-combination (cumulative) effects on the designated sites (e.g. Little Cheyney Court windfarm). *I would also recommend that plans and projects that the Environment Agency are implementing should be considered along with the expansion of Lydd Airport (which has been consented but not implemented) as part of the in-combination assessment.*

Additional activities that I would recommend are considered as part of the assessment are:

- *Impacts from any additional infrastructure requirements to facilitate the minerals extraction;*

- for example additional or modified haul routes, discharge pipelines and conveyor belts*
- *Site decommissioning and restoration*

Information about the features of the designated sites:

- Baseline ecology (habitats and species) recorded at and surrounding Lydd Quarry and Allens Bank Areas (including designated features of prostrate broom and blackthorn at Dungeness SAC)
- Key attributes of these habitats and species
- Structure, function and supporting processes of habitats (including those which qualifying species rely on)
- Vulnerability/sensitivity of features and any seasonal influences (link to below if necessary)

Description of potential impacts:

- *Direct habitat loss - I would advise this should include habitat within the SPA and Ramsar Site and land which SPA and Ramsar Site species rely on for feeding and roosting which may be outwith the designated site boundaries (often referred to as supporting habitat or functionally linked land)*
- *Direct and indirect habitat changes (e.g. as a result of hydrological, salinity and geological changes along with habitat connectivity/severance impacts.)*
- *Disturbance (visual/noise) to species*
- *Barrier to species movement*
- *Introduction of invasive non-native species*
- *Air and water pollution*
- *Implications of the above habitat loss and alterations for all of the species of interest within the SPA, SAC and Ramsar Site including birds, aquatic plants and invertebrates, prostrate broom, blackthorn and water voles*

Description of possible mitigation measures and how these will be implemented and monitored:

- *E.g. details of the avoidance measures and consideration of alternative sources of securing the County's mineral needs such as alternative sites or off-shore resources.*
- *E.g. wet working on all areas*
- *E.g. discharging water to lakes to retain water levels*
- *E.g. screens around works to minimise disturbance*
- *E.g. Restrictions to working times – dawn/dusk, seasonal restrictions on working, ensuring water levels are maintained across the marsh throughout the working*

Other advice

There are also other possible impacts resulting from this proposal that you should consider when assessing the implications of this allocation on the natural environment, in accordance with the NPPF and Policy CSM1 of the adopted Minerals and Waste Plan. The proposal may have implications for local landscape along with protected and/or priority species and we recommend you consult your in-house specialists in relation to the potential impacts that may arise from the proposed site allocation at Lydd Quarry.

For clarification of any points in this letter, please contact Sean Hanna on 0208 0266 064 or by email to sean.hanna@naturalengland.org.uk. This letter concludes Natural England's Advice within the Quotation and Agreement dated 10 September 2018.

The advice provided in this letter has been through Natural England's Quality Assurance process

The advice provided within the Discretionary Advice Service is the professional advice of the Natural England adviser named below. It is the best advice that can be given based on the information provided so far. Its quality and detail is dependent upon the quality and depth of the information which has been provided. It does not constitute a statutory response or decision, which

will be made by Natural England acting corporately in its role as statutory consultee to the competent authority after an application has been submitted. The advice given is therefore not binding in any way and is provided without prejudice to the consideration of any statutory consultation response or decision which may be made by Natural England in due course. The final judgement on any proposals by Natural England is reserved until an application is made and will be made on the information then available, including any modifications to the proposal made after receipt of discretionary advice. All pre-application advice is subject to review and revision in the light of changes in relevant considerations, including changes in relation to the facts, scientific knowledge/evidence, policy, guidance or law. Natural England will not accept any liability for the accuracy, adequacy or completeness of, nor will any express or implied warranty be given for, the advice. This exclusion does not extend to any fraudulent misrepresentation made by or on behalf of Natural England.

Yours sincerely

Sean Hanna

Sean Hanna
Lead Adviser
Sussex and Kent Team

Appendix 5 - Alternative Supply of Aggregates and Socio-economic Considerations – Lydd Quarry (M2)

Alternative Supplies

Natural England (see Appendix 1 - letter dated 10th October ref. DAS/2340/255496) have raised the issue of a potential adverse impact (including direct and indirect in type) on the SPA/Ramsar, from loss of habitat (parcel 19) and essentially hydrological impacts. This requires the County Council (as a competent body) to consider alternatives to the landwon aggregate supply as part of the overall AA process, in accordance with the Habitat Regulations (stage 3: Habitat Regulations Assessment Handbook).

The matter was discussed with the site promoter and in response a report was submitted that has, from the perspective of the promoter, examined the potential for alternatives to further landwon extraction of aggregates at Lydd Quarry and Allens Bank. The report, entitled '*An examination of the viability of meeting the demand for Lydd sharp sand and gravel from alternative sources*' was prepared by Davies Planning in September 2018. It addresses the matter by covering the following areas:

- Current activities at Lydd Quarry, the nature of the aggregate deposit and other mineral products
- Other landwon resources as alternatives to continued Lydd production
- Potential for recycled aggregates to substitute landwon aggregate production at Lydd
- Potential for marine dredged aggregate to be a sustainable alternative source of supply utilising Kent, East Sussex and West Sussex importation points (wharves) and distribution (railheads and road network)
- Environmental and economic implications of using marine dredged materials
- Socioeconomic benefits of the continuation of quarrying operations into the promoted Option site Lydd Quarry and Allens bank (M2)

In light of the above points, the report concludes that though there is the alternative of marine dredged materials (given that further landwon resources are in general decline in Kent and elsewhere in the South East). However, the environmental impact of using the poorly distributed importation (wharf) points would have a unacceptable impact upon the economics of current supply (costs would increase to the end user); and that the increased carbon loading effect of having to transport the equivalent amount of material over greater distances would have a detrimental effect on the sustainability of supply. Also, the report pointed out that the site produces a number of minerals and mineral related products that are both increasingly scarce (the sharp sands and gravel that can be used in high specification concrete manufacture and beach replenishment at Dungeness) and that are unique to Lydd (brick mould facing sand and grinding cobbles).

The availability of a suitable landwon alternative resource to the Lydd material in the South East appears to be in decline. This is evidenced by the published Local Aggregate Assessment reports available from the web sites of the respective Mineral Planning Authorities in the region (as collated by the annual report produced by SEEAWP for the Ministry of Housing, Communities & Local Government (see link <https://www.gov.uk/government/collections/aggregates-working-parties-monitoring-reports>). The landwon alternative to continued Lydd extraction to maintain a steady and adequate supply may be unavailable. This may particularly be the case for the high quality 'flint' sands and gravel that have been the subject of extensive past mineral extraction operations in Kent's

principle river valleys. The upper Medway sandstone sand and gravels are deposits that are mineralogically distinct from the 'flint' type (such as the Taplow Formation in the River Darent valley) and though they may still be generally available as potential reserves, they are characterised as lower grade materials (being composed of Chalcedony and being angular to sub-angular in shape) and of less importance given their more restricted application in construction product specification. Although, it should be noted that the importance of the two types are not distinguished in the Kent Minerals and Waste Local Plan in Policy CSM 2.

With regard to the available marine resources, it would appear that the two materials (land-won storm beach sand and gravel and marine dredged sand and gravel) are essentially analogous, though it is possible that there are variations between materials from an ancient barrier (storm) beach shingle ridge complex (the promoted site material) and material from the marine sedimentary basin of the East English Channel and North Sea areas in terms of exact characteristics. Though this is not explored by the report. The materials are also in relative abundance, the Crown Estates stated in 2012 (to the then Mineral Sites Plan, Preferred Options Consultation May 2012) the following:

- *Over 900 million tonnes of marine sand and gravel (aggregate) has been dredged from offshore seabed over the last 50 years and at least 1,250 million tonnes is available for sustainable supply of construction aggregate over the next 50 years and beyond. Currently marine sand and gravel supply some 20% of the county's demand.*
- *The marine aggregate resource available in the East Coast, Thames Estuary and East English Channel areas and which are used to supply Kent wharves is 994 million tonnes of which 31.25 million tonnes is permitted for extraction per annum. Kent wharves only received some 1.3 million tonnes (4.2% of total permitted per annum) in 2010 but increased in 2011 with 1.55 million tonnes (5%). There is therefore a long term viable and sustainable supply of marine dredged aggregate both for construction uses and for direct beach nourishment by vessel delivery.*
- *The current rate of extraction by all companies to all marine aggregate wharves in the UK and on the European mainland is some 45% of the quantities permitted per annum thus reinforcing the sustainability and long term viability and requirement of marine aggregate wharves in Kent.*

Kent's wharves have 7.30mtpa overall importation capacity that is not being fully utilised (see published LAA2017 (see page 26, *Table 12: Total sales and Estimated Productive Capacity, 2016 (Million tonnes, Mt)* [to be updated by LAA2018]) with some 58% capacity remaining to be utilised. The Davies Planning report estimates that, given the poor distribution of wharves in Kent (significantly in the lower Thames reaches at Dartford, Gravesham and in Medway and elsewhere [e.g. Folkestone, Ridham and Whitstable]) and in East Sussex at Rye (limited capacity) Shoreham and Newhaven (non-operational aggregate terminal), for the same quantity of material currently being supplied to the Lydd market, wharf imported material substitution would result in an additional average of 30 HGV miles per tonne of material transported.

This would result in an additional 13-17,000 tonnes of carbon dioxide over the life of the promoted Lydd Quarry and Allen's Bank Option site. Also, additional costs (£150.00 per tonne) to the end user would be incurred due to the increased transportation. It is also contended that this situation would not be relieved by increased use of Kent's aggregate railheads as these are again limited in number, of low capacity and again poorly distributed overall (notable exception of Sevington at Ashford, though this is considered now unavailable for aggregate importation due to recent planning permission for Network Rail for rail track ballast importation). However, these matters have to be weighed against the need to satisfy the Appropriate Assessment tests of the consideration of the

availability of alternatives as set out in the Habitats Regulations Assessments Handbook; Section c.13 Alternative solutions, Part 10 states:

The alternative solutions should be financially, legally and technically feasible. An alternative should not be ruled out simply because it would incur greater inconvenience or cost. However, there will come a point where an alternative is so very expensive or technically or legally difficult, that it would be unreasonable to consider it a feasible alternative solution.

In terms of the assessment of alternatives, the materials that the promoter is claiming to be important are:

- sand and gravel,
- a specialist brick making sand and
- large cobbles stones.

The cobble stones are purportedly used as a grinding media and specialised construction projects are found both in marine deposits and in other localities extracting Storm Beach materials. They form some 1-2% of the overall deposit and are a marginal material in the commercial sense. Moreover, are a material that is an industrial, and not an aggregate mineral that requires to have landbanks maintained by site allocation in the Kent Mineral Sites Plan. Therefore, the consideration of alternatives is not relevant in this instance.

The specialist sand mineral described as unique to Lydd, is used in brick manufacture as a facing sand and does appear to be an important material. It reportedly has been used since the 1950's from the locality and is of a type that is not apparently readily substituted. However, while the Lydd deposit sands may be a source of suitable facing sand used in brick making, this is an industrial mineral application and thus not an aggregate mineral for which allocations in the Mineral Sites Plan are required. The consideration of alternatives is therefore not relevant in this instance.

The bulk of the resource available in the site as promoted are a sand and gravel aggregate suitable for high specification concrete production. Alternative supply is available in the form of other high quality 'flint' sands and gravel materials from the land. This is opposed to river terrace sand and gravel that often are more angular in shape, iron mineral stained, and have a lower tensile strength (given that they are mineralogically different than the 'flint' aggregates that have a purer quartz chemistry rather than a being Chalcedony in type, this being a mixture of two quartz polymorphs and are of lower strength). Making the material less suitable for high specification concrete production. The land based 'flint' sands and gravels are now, as has been stated above, of limited occurrence given the significant extraction of past decades. The River Darent valley in North Kent may be the last source of material that is comparable to the land-based Lydd sands and gravels.

The main alternative source of material found in marine sands and gravels that are present in significant quantity on the sea floor of the East English Channel and North Sea. The Crown Estate are responsible for licensing extraction from the sea bed in these areas and have stated "*1,250 million tonnes is available for sustainable supply of construction aggregate over the next 50 years and beyond*". Clearly, the materials are available as an alternative source of supply to meet objectively identified needs.

Sourcing increased importation into the Lydd market area (reportedly up to Bexhill in the west, Canterbury in the north and Dover in the east) would have to incur an average of another 30 HGV road miles per tonne of aggregate it is stated, due to the poor distribution of wharves in Kent and East Sussex in relation to the Lydd market area. This is expected to load the environment with

between 13-17,000 tonnes of carbon dioxide and increase costs by as much as £150.00 per 21 tonne delivered load. The contention being that though an alternative supply exists it is not a sustainable or economically viable alternative.

It is recognised that wharves and railhead importation is not evenly distributed around the county and also are not equal in their suitability and capacity (railheads) to take up the demand increases. Increased importation via the significant new facility at Newhaven (once access matters are addressed) and potentially from Kent's northerly situated wharves would cause effects as reportedly outlined by the promotor of the site. Though the adopted policy of the Kent Minerals and Waste Local Plan 2013-30 recognises that future land-won supply will not address all the identified need over the Plan period, and thus it is established in policy that the increased importation is part of Kent's future sustainable plan to maintain a steady and adequate supply of aggregates.

The issue with regard to the impacts (direct and indirect) on the SPA is that they remain essentially uncertain. The Habitat Regulations make it clear that if there are alternative solutions that would have a lesser effect or avoid an adverse effect on the integrity of the designated site, then that alternative should be pursued. Clearly, there is an alternative to the continuation of the Lydd supply of high-quality aggregates that essentially meets the test, as set out in the Habitats Regulations Assessments Handbook, Section c.13 Alternative solutions, Part 10:

The alternative solutions should be financially, legally and technically feasible. An alternative should not be ruled out simply because it would incur greater inconvenience or cost. However, there will come a point where an alternative is so very expensive or technically or legally difficult, that it would be unreasonable to consider it a feasible alternative solution.

The increased use of wharf capacity (that is lawfully available) can be achieved without any recourse to any tests of legality or technical assessment. With only around some 42% of the operating capacity of Kent wharves being taken up demonstrates that there is ample head room for expansion, to address the potential loss of the landwon Lydd produced material with a suitable alternative marine aggregate material. The impact on the wider environment (increased carbon loading) from increased use of importation is an understood position reflected in adopted Policy CSM 2 of the Kent Minerals and Waste Local Plan 2013-30. This policy makes clear that landwon resources are to be provided for, while resources allow. After which, importation substitution would increasingly occur. This position has been subject to Sustainability Appraisal and Independent Examination and has been found sound in Policy CSM 2. The increased costs associated with increased transportation are an inevitable consequence of this position, given established markets and the uneven distribution of importation points (wharves and railheads). Therefore, there is not an imperative need to allocate the site in accordance with Policy CSM 2 Supply of Land-won Minerals in Kent of the Kent Minerals and Waste Local Plan 2013-30.

Socio-economic benefits

In support of the allocation the promoter submitted a report¹⁸ setting out the socio-economic benefits of continued working of aggregates from Lydd and Allens Bank. Consideration of this matter is undertaken in the context of NPPF Part 6 section 8 that states:

'Planning policies and decisions should help create the conditions in which businesses can invest, expand and adapt. Significant weight should be placed on the need to support economic growth and productivity, taking into account both local business needs and wider opportunities for development.'

¹⁸ Hatch Regeneris report of August 2018

The approach taken should allow each area to build on its strengths, counter any weaknesses and address the challenges of the future. This is particularly important where Britain can be a global leader in driving innovation, and in areas with high levels of productivity, which should be able to capitalise on their performance and potential.'

Furthermore, NPPF policy (paragraph 175) on the protection of SSSIs states (with emphasis):

*“development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where **the benefits of the development in the location proposed** clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;”*

Therefore, the economic potential of the site has some bearing on its acceptability for allocation. The socio-economic benefits of the site in terms of its gross value addition (GVA) potential to the wider Lydd area have been assessed by engaged consultants (Hatch Regeneris). Their submitted report examines the headline economic benefits of the site by comparing the current GVA value to the locality of the site up to the end of the current reserve life (2 years) and projecting on until 2034, to coincide with the life of the extension area currently being promoted.

The model employed (by Hatch Regeneris) uses the national median wage of £28.8k (ONS data) and then uses a 55% multiplier on that wage level to create a GVA figure of £52.6k per employee that benefits the local economy. This concludes that the current reserves (being worked in East Sussex) will give a £2.8 million GVA to the overall locality. If the Kent promoted Option site (parcels 16-23) were to come forward, the effect would be a GVA of £44.8 million over 15 years to 2034.

The use of ONS statistics to determine local wages are not considered to be very representative of wages in the area. A breakdown of the current jobs employed (as given by the promoter both direct and indirect) and applying comparable age rates found in job advertisements as set out in the table below shows that the site produces an average (not median) wage of around about the £23.8k mark.

Jobs type Lydd Quarry	FTE (Full Time Equivalent) Posts	Salary in Pounds per annum
Manager	1	50K
Foreman	1	30K
Weighbridge clerk	1	15K
Fixed and mobile plan operatives	5	5x20K=100K
Contract earthmoving	1	20K
Maintenance	1	30K
Mechanical and electrical maintenance	1	30K
Company HGV divers	7	7x26K=182K

Contracted HGV drivers	2	2x26K=52K
Customer HGV drivers	2	2x26K=52K
Sub-total	22	531K
Ready-mix concrete Production		
Plant operative	1	25K
Truck drivers	2	2x26K=52K
Sub-total	3	77K
Aggregate Bagging Operation		
Bagging operatives	11	11x18K=180K
HGV drivers	8	8x26K=208K
Contracted HGV drivers	7	7x26K=182K
Customer HGV drivers	3	3x26K=78K
Sub-Total	29	648K
Total FTE employment	54	1286K divided 54 FTE gives 23.8K average salary

Using the consultant's £55% GVA multiple methodology this gives the following result;

GVA Based on Wages at 55%

	GB	Folkestone and Hythe
Annual by FTE	£52,217	£43,273
Annual at 54FTE	£2,819,742.55	£2,336,727.27
2 Year NPV at 3.5% DR	£5,356,649	£4,439,067
16 Year NPV at 3.5% DR	£34,102,296	£28,260.653

The adjusted GVA to the wider economy is considered to be more in the region of £28.3 million if the site extension areas, as promoted, were to gain planning permission and be implemented successfully. Not the £44.8 million as suggested by the Hatch Regeneris report. This also analysis did not look at the wider economy of the Folkestone and Hythe District in terms of its value to that economy. If this is done, the following becomes apparent:

- Folkestone and Hythe District has 48,000 jobs (includes self-employed and armed forces) 36,000 employed jobs 24,000 of which are full time
- 54 jobs as a percentage of just the full time (24k) available jobs is 0.225%, or lower if you compare to employed jobs at 0.15% and even lower when compared to all jobs.

Based on the Hatch Regeneris methodology for calculating GVA, every job produces the same, no matter the industry, so the % of GVA would be the same as the jobs. Giving the following tabulated data.

Annual GVA Folkestone and Hythe	
36,000 jobs	£1,557,818,182
54 additional jobs FTE	£2,336,727
As a %	0.15%

(based on £23,800 annual salary per FTE)

The 54 FTE direct and indirect jobs that would be supported by the site is equivalent to approximately 0.15% of the average GVA in the Folkestone and Hythe District. The data does not give a Lydd Town GVA figure as ONS employment data to this local level is unavailable.

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Early Partial Review of the Kent Minerals and Waste Local Plan 2013-30

Pre-Submission Draft

- Proposed modifications to certain policies relating to waste management:
 - Policies CSW 4, CSW 5, CSW 6, CSW 7, CSW 8 (Non-hazardous waste)
 - Policy CSW 12 (Hazardous waste)
 - Policy CSW 14 (Disposal of Dredgings)

- Proposed modifications to certain policies relating to landwon minerals and minerals and waste management infrastructure safeguarding:
 - Policy DM 7 (Safeguarding Mineral Resources)
 - Policy DM 8 (Safeguarding Minerals Management, Transportation, Production & Waste Management Facilities)

Contents

1.0	Introduction	3
2.0	Proposed modifications to certain policies relating to waste management	3
2.1	Background	3
2.1.1	Policy CSW 4: Strategy for Waste Management Capacity; Policy CSW 7: Waste Management for Non-hazardous Waste; and, Policy CSW 8 Other Recovery Facilities for Non-hazardous Waste	4
2.1.2	Policy CSW 12: Identifying Sites for Hazardous Waste; Policy CSW 14 Disposal of Dredgings	9
2.2	Proposed Modifications to Text of the Kent Minerals and Waste Local Plan Concerning Waste Management	10
3.0	Proposed modification to relating to minerals and waste safeguarding: Policies DM 7 and DM 8	28
3.1	Background	28
3.2	Policy DM 7 – Safeguarding Mineral Resources	28
3.3	Policy DM 8 - Safeguarding Minerals Management, Transportation Production & Waste Management Facilities	31
	Appendices:	36
	Appendix 1 - Waste Needs Assessment – Summary of Key Conclusions	36
	Appendix 2 - Clean Copy of Proposed Modifications	39

1.0 Introduction

The County Council is partially reviewing the adopted Kent Minerals and Waste Local Plan 2013-30 (the Plan). The Plan sets out the strategy for the sustainable management of Kent's waste, the delivery of minerals where a need exists and is the primary element of the development plan against which planning applications and appeals for minerals and waste development in Kent will be determined.

Modifications are proposed in the following areas:

- Waste management:
 - o The strategy for provision of future waste management capacity
 - o The identification of site allocations for waste management facilities
- The approach to safeguarding mineral resources and waste management and minerals supply infrastructure.

The context to the proposed modifications is explained below and the proposed changes to the text of the Plan are also included.

2.0 Proposed modifications to certain policies relating to waste management

2.1 Background

The adopted Plan identifies a shortfall in capacity of the following types over the Plan period (to 2030):

- Waste recovery capacity - energy from waste and organic waste treatment;
- Hazardous waste (due to the identified need for additional capacity to allow for the continued landfilling of asbestos)
- Disposal of Dredgings.

As a consequence, policies CSW7, CSW8, CSW 12 and CSW 14 state that a Waste Sites Plan will be prepared that will identify sites suitable for accommodating facilities needed to address the identified capacity shortfalls.

A review¹ of the future needs for waste management facilities in Kent has been undertaken and this has concluded that there is now no need for the development of this additional capacity. This is for the following reasons:

- Energy recovery capacity: the additional capacity at Kemsley Sustainable Energy Plant (SEP) is now confirmed.
- Hazardous waste: Due to the lack of need for additional capacity to allow for the continued landfilling of projected arisings of asbestos from Kent within Kent.
- Disposal of Dredgings: No clear need identified by Port of London Authority (PLA) (the responsible navigation authority) for a specific site.

In addition, while there remains an identified need for organic waste treatment capacity, it is considered that adopted policy in the MWLP is sufficiently permissive and positive enough for applications to be encouraged to come forward without the allocation of specific sites. It should also be noted that when recycling and composting are considered together there is no predicted shortfall in capacity.

The review and modification of the policies mentioned above will ensure the development plan for Kent, insofar as policies relating to provision for waste management are concerned, is relevant and effective, reflecting changes in circumstances. This is consistent with paragraph 31 of the National Planning Policy Framework which states that:

“The preparation and review of all policies should be underpinned by relevant and up-to-date evidence. This should be adequate and proportionate, focused tightly on supporting and justifying the policies concerned, and take into account relevant market signals.”

An explanation of the proposed modifications is set out below.

2.1.1 Policy CSW 4: Strategy for Waste Management Capacity; Policy CSW 7: Waste Management for Non-hazardous Waste; and, Policy CSW 8 Other Recovery Facilities for Non-hazardous Waste

¹ BPP Consulting Kent Waste Needs Assessment 2018 Specifically: *Non Hazardous Waste Recovery Capacity Requirement, September 2018; Non Hazardous Waste Recycling/Composting Capacity Requirement, September 2018; and Hazardous Waste Needs Assessment, September 2018.*

Policy CSW 7 sets out the requirements for the provision of new waste management capacity for non-hazardous waste. The policy is intended to increase the provision of waste management capacity for recovery while recognising the need to drive waste up the hierarchy².

The original Needs Assessment for waste management facilities (originally prepared in 2011 and partially updated in January 2012: *Addendum to the Needs Assessment Modelling Technical Report*) showed that there was, at the time, no lack of capacity for the preparation of non-hazardous waste for reuse or recycling during the whole of the plan period. However, the Needs Assessment showed a capacity gap emerging in 2024 for treating green and kitchen wastes and in order to rectify a perceived imbalance of capacity between recycling and composting Policy CSW 7 seeks to address that particular gap in provision. The policy identified (as a minimum) 64,000 tonnes per annum (tpa) requirement by 2031.

In addition, the Needs Assessment identified a projected shortfall in "other" recovery capacity of 562,000tpa by the end of the Plan period.

Policy CSW 7 includes the following future capacity requirements based on the Needs Assessment mentioned above:

Year	Maximum Additional Capacity Required (tpa)	Indication of Number of New facilities for Recovery Needed	Minimum Additional Treatment Capacity for Green and Kitchen Wastes (tpa)	Indication of Number of New Facilities needed for Treating Green and Kitchen Waste
2011	0	0	0	0
2016	375,000	1-2	20,000	1
2021	125,000	1	0	0
2026	62,500	1	20,000	1

² The 'waste hierarchy' is both a guide to sustainable waste management and a legal requirement, enshrined in law through the Waste (England and Wales) Regulations 2011. The hierarchy gives top priority to waste prevention, followed by preparing for re- use, then recycling/composting, then other types of recovery (including energy recovery), and last of all disposal (e.g. landfill).

2031	0	0	24,000	1
Total	562,000	3-4	64,000	3

The recovery capacity requirement is expressed as a maximum, whereas the organic treatment capacity is a minimum; reflecting the relative positions of these methods of waste management in the Waste Hierarchy. That is to say it is preferable to process organic waste to produce compost, for example, than to burn it to produce heat/power. The use of organic waste to produce a gas via anaerobic digestion that may be used as a fuel is also considered preferable to its direct combustion.

In light of the position of recycling further up the Waste Hierarchy, the Plan does not restrict the amount of additional capacity for waste management for recycling or preparation of waste for reuse or recycling, nor does it suggest provision of the additional capacity of green and/or kitchen waste treatment facilities should occur in the later part of the Plan period since the sooner it is delivered, the greater the impact will be on reducing organic waste going to landfill, the most significant source of methane production.

The implementation of Policy CSW7 was intended to result in reducing the amount of non-hazardous waste from Kent going for disposal to landfill to less than 76,000 tpa by the end of the Plan period, and to also assist in husbanding existing non-hazardous landfill capacity in Kent to the end of the Plan period to provide management capacity for any non-hazardous waste that cannot be reused, recycled, composted or recovered.

On adoption of the Plan (in July 2016) the Policy CSW7 capacity requirements for additional recovery capacity were considered to be robust. However, calculation of the requirements had not taken into account the planning permission (granted in 2012) for a Sustainable Energy Plant taking waste as a fuel to produce energy including heat at Kemsley Fields Business Park due to the lack of certainty concerning its implementation at that time. However, it can now be stated that the project will be fully implemented with commissioning scheduled for 2019. Therefore, it is now appropriate for the capacity of the site (some 525,000 tpa) to be counted as part of the available waste recovery capacity of the Plan area. An update of the Needs Assessment using more current data and updated assessment methods (See separate BPP Consulting waste needs assessment reports³ and summary of key

³ Note that these reports are updated versions of the reports published as part of the consultation on the draft Early Partial Review in late 2017/early 2018.

conclusions in Appendix 1) indicates that the shortfall of 562,500 tpa of non-hazardous waste management capacity included in Policy CSW7 is now highly unlikely to arise. In order to avoid overprovision of waste recovery capacity, which may discourage the development of recycling and composting capacity further up the waste hierarchy, it is proposed that policies CSW 7 and CSW 8 be modified to eliminate the stated waste recovery requirement to be planned for.

While Appendix 1 shows there remains a predicted shortfall in organic waste treatment capacity, when recycling and composting are considered together, there is no overall predicted shortfall in recycling and composting capacity.

The original calculation of recycling and composting capacity requirements presented in Policy CSW 7 was based on targets formulated In January 2012 using 2010/11 data⁴. The LACW targets were based on the aspiration of KCC in its role as Waste Disposal Authority (WDA) for Kent and the C&I targets were based on those in the South East Plan (adopted in 2009).

Since adoption of the KMWLP, the EU Circular Economy Package has been adopted and the UK Government has confirmed its intention to comply with the targets set within it regardless of the UK leaving the European Union. Therefore, the targets have been updated to reflect those set as follows:

- recycling target for municipal waste 55% by 2025 and 60% by 2030; and
- 10% limit of landfilling of municipal waste by 2035.

In addition, the progression to achieving LACW recycling targets has been scaled back (compared both to adopted Plan and the draft Partial Review document) to reflect the fact that the actual recycling rate achieved in 2015/16 was five percentage points lower than projected in the adopted KMWLP (46% rather than 51%), therefore the revised targets are more achievable (while remaining ambitious).

The differences between the targets in the adopted KMWLP and those proposed are presented in Tables 1 and 2 below.

Local Authority Collected Waste Targets

italicised values are historical actual values included for baseline purposes

		Milestone Year
--	--	-----------------------

⁴ Waste Management Statistical Basis for the Kent County Council Minerals and Waste Development Framework Addendum to the Needs Assessment Modelling Technical Report Needs Assessment 2011 Update January 2012

		2015/16	2020/21	2025/26	2030/31
Recycling/ composting	Adopted KMWLP	51.00%	55.00%	59.00%	62.00%
	Proposed	46.00%	50.00%	55.00%	60.00%
	Difference		-5.00%	-4.00%	-2.00%
Remainder to Other Recovery⁵	Adopted KMWLP	40.00%	38.00%	37.00%	35.00%
	Proposed	47.00%	48.00%	43.00%	38.00%
	Difference		+10.00%	+6.00%	+3.00%
Landfill	Adopted KMWLP	9.00%	7.00%	4.00%	2.50%
	Proposed	6.00%	2.00%	2.00%	2.00%
	Difference (expressed in converse as difference is positive)		5.00%	2.00%	0.50%

Commercial & Industrial Waste Targets

		Milestone Year			
		2015/16	2020/21	2025/26	2030/31
Recycling/ composting	Adopted KMWLP	61.00%	63.00%	65.00%	65.00%
	Proposed	n/a	50.00%	55.00%	60.00%
	Difference		-13.00%	-10.00%	-5.00%
Remainder to Other Recovery⁶	Adopted KMWLP	20.00%	21.00%	19.00%	19.00%
	Proposed	n/a	35.00%	32.50%	30.00%
	Difference		+14.00%	+13.50%	+11.00%
Landfill	Adopted KMWLP	19.00%	16.00%	16.00%	16.00%
	Proposed	n/a	15.00%	12.50%	10.00%
	Difference (expressed in converse as difference is positive)		1.00%	3.50%	6.00%

The revised targets have been incorporated into Policy CSW4 to aid annual monitoring of the Plan (through the Annual Monitoring Report (AMR)) and identify whether shortfalls may exist; providing clear guidance to developers and the Authority on the need for proposals for additional capacity where it involves management through methods that fall below recycling, composting or reuse in the Waste Hierarchy.

2.1.2 Policy CSW 5 Strategic Site for Waste

⁵ This identifies the consequential predicted remaining management requirement assuming the other targets are met.

⁶ As footnote 5

Policy CSW 5 sets out the criteria to be applied to the assessment of any forthcoming application relating to the Strategic Site Allocation at Norwood Quarry. It is proposed to add a clause providing for assurances that the proposed site can be suitably restored in the event that the void space may no longer be used for management of air pollution control residues due to a possible change in government policy. Currently national policy allows landfilling of such waste under a special derogation from the Landfill Directive waste acceptance criteria requirements. This has been subject to review in the past and may change in future. In addition, it is proposed to delete the requirement for an assessment of alternative management methods given that significant tonnages are already being managed through other treatment routes.

2.1.3 Policy CSW 12: Identifying Sites for Hazardous Waste; Policy CSW 14 Disposal of Dredgings

Policies CSW 12 and CSW 14 are also to be modified since the need identified in the original Needs Assessment is no longer apparent. In particular a future need for additional landfill capacity to accommodate asbestos waste in Kent has not been identified given that the aspiration for maintaining net self sufficiency in hazardous waste management capacity overall will be met by the Plan's provision of additional hazardous waste landfill capacity (air pollution control residues) at Norwood Farm. A review of the need to accommodate predicted arisings of asbestos waste from Kent alone⁷ indicates that current disposal capacity will be sufficient for the Plan period. Nor has the need for the provision of a specific landfill for disposal of dredgings been confirmed by the main beneficiary of any such facility (the Port of London Authority).

⁷ BPP Consulting Waste Needs Assessment 2018

2.2 Proposed Modifications to Text of the Kent Minerals and Waste Local Plan Concerning Waste Management

In light of the changes to the assessment of waste capacity requirements as set out in the previous section, it is proposed that the text of the Kent Minerals and Waste Local Plan be modified as set out below.

Note that new text is shown in italics, bold, and underlined (***like this***) and deleted text is shown struck through (~~like this~~).

A clean copy of the proposed modifications is set out for information in Appendix 2

1.1.3 The specific sites for minerals ~~and waste~~ developments will be set out in the separate Kent Minerals ~~and Waste~~ Sites Plans. The site selection process for the final sites included in the ***Minerals*** Sites Plans will be based on the policies in the Kent MWLP.

1.2.2 The policies in this Plan replace the earlier versions of the saved Kent Minerals and Waste Local Plan policies. Appendix B lists the schedules of saved Kent Local Plan policies replaced, deleted or retained. ~~Site specific policies from the saved Kent Minerals and Waste Local Plan policies will be retained until the Kent Minerals Sites Plan and the Kent Waste Sites Plan are adopted.~~

6 Delivery Strategy for Waste

[Policy CSW1 and para 6.1.1- 6.1.2 remain unchanged]

6.2 Policy CSW 2: Waste Hierarchy and Policy CSW 3: Waste Reduction

6.2.1 It is Government policy to break the link between economic growth and the environmental impact of waste by moving the management of waste up the Waste Hierarchy, as shown in Figure 18. (75)

Figure 18 Waste Hierarchy

6.2.2 The Kent MWLP mainly implements this policy through influence over waste and minerals developments. However, the Plan also includes a policy (Policy CSW 3) seeking to influence/reduce waste arising from all forms of development. The Kent MWLP forms part of the development plan, along with the district local plans, and is therefore relevant to the determination of planning applications for all forms of development in Kent.

6.2.3 In accordance with the Waste Hierarchy, the Plan gives priority to planning for waste management developments that prepare waste for re-use or recycling. ***The most recent assessment of waste management capacity requirements*** Needs

~~Assessment for waste~~ ⁽⁷⁶⁾ shows that Kent's current recycling and processing facilities have sufficient capacity for the anticipated rate of usage ~~with the exception of facilities for green and kitchen wastes~~. It should be appreciated that these calculations are based upon a rate of use that should only be regarded as a minimum, as the aspiration is to encourage more **of the waste that is produced in Kent** to be managed **by methods at this tier of the hierarchy** ~~through this method of waste management~~.

6.2.4 Encouraging more waste to be managed via re-use or recycling will be achieved by enabling policies for the development of **additional** waste management **capacity** facilities for recycling and processing **including** ~~through the following measures:~~

- ~~the identification in the Waste Sites Plan of all of the deliverable, sustainable sites for these forms of waste management that have been promoted for inclusion by landowners or the waste industry~~
- a policy **presumption** to grant planning permission for redevelopment or extensions to **lawful** existing waste **management** facilities to enable more waste to be recycled or processed for re-use providing **the proposal is in accordance with the locational and development management policies in the Plan** ~~if the facility's capacity for the maximum annual tonnage of waste is not increased.~~

6.2.5 The application of the Waste Hierarchy **is a legal requirement under the Waste (England and Wales) Regulations 2011**. ~~is most appropriate to producers of waste when assessing how to manage waste. The Kent MWLP has to plan for all forms of waste management in the Waste Hierarchy to make this possible. While It is anticipated that there will be a transition over time to forms of waste management at the higher end of the Waste Hierarchy, there will still be a need for disposal at the end of the plan period for difficult to treat wastes, or wastes such as asbestos for which there is no present alternative. The Kent MWLP addresses this transition by seeking to rapidly provide a more sustainable option for the mixed non-hazardous waste that is going to landfill by **applying ambitious but achievable landfill diversion targets presented in Policy CSW 4** identifying sites for energy recovery. Due to other recovery being at the lower end of the Waste Hierarchy, the total amount of new energy recovery capacity to be permitted will be capped. It is envisaged that this method of waste management will become displaced as recycling and waste processing become more economically viable.~~

Footnote 76 Jacobs (January 2012) Addendum to the Needs Assessment Modelling Technical Report - Needs Assessment 2011 Update **Consulting Waste Needs Assessment 2018**.

[Policies CSW 2 and CSW 3 remain unchanged]

6.3 Policy CSW 4: Strategy for Waste Management Capacity

Net Self-sufficiency and Waste Movements

6.3.1 Kent currently achieves net self-sufficiency in waste management facilities capacity for all waste streams. I.e. the annual capacity of the waste management facilities (excluding transfer) in Kent is sufficient to manage the equivalent quantity of waste to that predicted to arise in Kent. The continued achievement of the principle of net self-sufficiency and the management of ing waste close to its source is a are key Strategic Objectives of the Kent MWLP, because it shows that Kent is not placing any unnecessary burden on other WPAs to manage its waste. Net self sufficiency recognises that existing (and future) waste management capacity within Kent may not necessarily be for the exclusive management of Kent's waste. Proposals that would result in more waste being managed in Kent than is produced may be acceptable if it was demonstrated that these would result in waste produced in Kent being managed at a higher level of the waste hierarchy. Achievement of nNet self-sufficiency can be monitored on an annual basis and will provide an indicator as to whether the policies in the Plan need to be reviewed.

6.3.2 In reality, different types of waste are managed at different types of facilities. To assess the future needs for waste facilities in Kent, net self-sufficiency has been studied for the individual waste streams of inert, non-inert (also called non-hazardous) and hazardous wastes. While Kent currently achieves net self-sufficiency for each of these wastes separately, new facilities this position will be monitored to ensure this will need to be developed for each of these waste streams if it is to remain s the case net self-sufficient throughout the plan period.

6.3.3 The ~~Kent AMR 11/12 (77)~~ shows that there was a considerable movement of waste both into and out of Kent for management. In 2010, just over 1,000,000 tonnes of waste originating in Kent was managed outside Kent and facilities in Kent managed approximately 750,000 tonnes of waste that did not originate in Kent. The purpose in adopting the principle of net self-sufficiency is not to restrict the movement of waste as such restriction of waste catchment areas could have an adverse effect upon the viability of the development of new additional waste management capacity facilities needed to provide additional capacity for Kent's waste arisings.

Provision for Waste From London

6.3.4 Specific provision in the calculations for new capacity required for non-hazardous waste going to landfill or EfW has been made for waste from London. The reason for this is twofold:

1. The evidence base prepared for the partially revoked SEP (the SEP and its evidence base are still relevant to the Plan and form part of its evidence base) shows a continuing need for the disposal of residual non-hazardous waste arising from London in the South East. The SEP quantified the amounts arising and apportioned the provision of capacity to be provided by each of the WPAs. In the absence of any more recent quantification of the amount of residual non-hazardous waste arising in

London that might come into Kent for management, the Plan uses a provision allowance based on the partially revoked SEP apportionment.

2. The major non-hazardous landfill site in Havering, east London, (78) which includes in its catchment area waste arising from the parts of London closest to Kent, is set to close by 2018 and could cause a potential influx of additional waste into Kent. If this is not taken into account, the increase in management of non-hazardous waste originating in London within waste facilities in Kent could have an adverse effect on the capacity of Kent's facilities to manage its own waste originating in the county.

that due to land constraints London's residual waste cannot all be managed within London itself and so, as a neighbouring waste planning authority, Kent County Council has some responsibility to make provision for an element of this waste. Historical data indicates the tonnage to be provided for is in the region of 35,000 tonnes per annum. It is also recognised that closure of Rainham Landfill in the London Borough of Havering in 2026 may result in the displacement of waste from Kent currently managed there. Therefore, an additional tonnage of 20,000 tpa has been planned for on a contingency basis.

6.3.5 The Plan's approach to non-hazardous waste originating in London differs from the approach set out in the partially revoked SEP as follows:

The SEP's apportionment of London's waste was to be provided by the provision of non-hazardous landfill. The Plan is instead making provision for London's non-hazardous waste through EfW capacity. (79)

The SEP required provision to be made in Kent for landfilling 158,880 tpa of London's non-hazardous waste for the period for 2006 to 2015. There is no evidence of this rate of London's waste being landfilled in Kent. The maximum quantity of London waste that has been deposited in Kent's landfills in recent years is 21,259 tpa. The Plan makes provision for 21,259 tpa to be disposed in either non-hazardous landfill or EfW in Kent.

The SEP anticipated a dramatic decrease in the amount of London non-hazardous waste being exported into the South East by 2016, due to the expectation that the only non-hazardous waste exported would be EfW residues. The Plan anticipates an increase in the amount of waste coming into Kent for disposal in 2018 since the non-hazardous landfill in Havering is expected to close by the end of 2017.

For the period of 2017 to 2030, the Plan makes provision for 87,000 tpa of London non-hazardous waste being disposed in Kent at non-hazardous landfill and EfW facilities. This is the SEP figure for the period of 2016 to 2025 and is used in the Plan as there is no other up-to-date assessment of the amount of London's non-hazardous waste that might be exported to Kent for disposal.

78 The Veolia Rainham landfill in the Borough of Havering.

79 It is anticipated that London's non-hazardous waste might go to either Kent non-hazardous landfill or EfW, or both. No specific, additional provision is being made for new non-hazardous landfill as the provision of new EfW is expected to free up some capacity at existing landfill sites given that EfW is expected to be a more cost-effective option.

6.3.64 For the plan period, An assessment has been made of the **current profile of management of the principal waste streams. The targets applied reflect ambitious (but realistic) goals for moving waste up the hierarchy and seek to ensure that the maximum quantity of non hazardous waste is diverted from landfill.**

new types of facilities that will be required in terms of broad categories of waste management facilities, such as landfill, recycling and composting, and other recovery, which roughly correspond to stages in the Waste Hierarchy. In this Needs Assessment for different categories of facilities has been based on the targets for recycling and recovery (and by deduction for landfill) as set out in the Kent JMWMS (80) and its Refreshed Objectives and Policies, (81) and the revised WFD. (82)

Policy CSW 4

Strategy for Waste Management Capacity

The strategy for waste management capacity in Kent is to provide sufficient waste management capacity to manage at least the equivalent of the waste arising in Kent plus some residual non-hazardous waste from London. As a minimum it is to achieve the targets **set out below** for recycling and composting **and other forms of recovery.**, reuse and landfill diversion identified in the Kent Joint Municipal Waste Management Strategy (as amended).

	<u>Milestone Year</u>			
	<u>2015/16</u>	<u>2020/21</u>	<u>2025/26</u>	<u>2030/31</u>
<u>Local Authority Collected Waste</u>				
<u>Recycling/composting⁸</u>	<u>n/a</u>	<u>50%</u>	<u>55%</u>	<u>60%</u>
<u>Other Recovery</u>	<u>n/a</u>	<u>48%</u>	<u>43%</u>	<u>38%</u>
<u>Remainder to Landfill</u>	<u>n/a</u>	<u>2%</u>	<u>2%</u>	<u>2%</u>
<u>Commercial & Industrial Waste</u>				
<u>Recycling/composting⁹</u>	<u>n/a</u>	<u>50%</u>	<u>55%</u>	<u>60%</u>

⁸ This is taken to include organic waste (including green and kitchen waste) treatment by Anaerobic Digestion

⁹ This is taken to include organic waste (including green and kitchen waste) treatment by Anaerobic Digestion

<u>Other Recovery</u>	<u>n/a</u>	<u>35%</u>	<u>32.5%</u>	<u>30%</u>
<u>Remainder to Landfill</u>	<u>n/a</u>	<u>15%</u>	<u>12.5%</u>	<u>10%</u>
<u>Construction & Demolition Waste (Non Inert Only)</u>				
<u>Recycling</u>	<u>n/a</u>	<u>12%</u>	<u>13%</u>	<u>14%</u>
<u>Composting</u>	<u>n/a</u>	<u>1%</u>	<u>1%</u>	<u>1%</u>
<u>Other Recovery</u>	<u>n/a</u>	<u>5%</u>	<u>5%</u>	<u>5%</u>
<u>Remainder to Landfill</u>	<u>n/a</u>	<u>2%</u>	<u>1%</u>	<u>0.5%</u>

It should be noted that the values shown for 'Remainder to Landfill' are not targets but are included to show the predicted requirement for landfill in light of the achievement of the targets to move waste up the hierarchy.

6.4 Policy CSW 5: Strategic Site for Waste

6.4.1 To meet the Kent MWLP objective of reducing the amount of waste being landfilled, the Plan is using policies to drive a major change in the way that waste is managed in Kent. To do this will require increasing numbers of facilities for recycling, composting and Anaerobic Digestion (AD) as well as additional facilities for EfW. Enabling the change in perception of waste from being something that has to be disposed to **something that can be** waste being used as a resource **will be helped by the development of such additional capacity further up the hierarchy.** This will need sufficient local capacity for the treatment or disposal of the residues arising from the existing and future EfW plants.

6.4.2 Kent has the benefit of a major EfW plant at Allington that features heavily in the Waste Management Unit (WMU) contracts for residual MSW. While this plant currently has spare capacity, additional EfW facilities will be required during the plan period to deal primarily with the volumes of C&I waste arising in Kent that are currently sent to landfill.

6.4.23 The landfill at Norwood Quarry on the Isle of Sheppey accommodates the hazardous flue ash residues from the Allington EfW facility **that feature heavily in the Waste Management Unit (WMU) contracts for residual MSW, but it has limited consented void space remaining.** To make provision for this waste for the duration of the Plan, it is considered essential that Kent has the capacity to deal with these residues **an extension to Norwood Quarry is identified.** Enabling the continued management of hazardous flue ash within Kent has the added benefit of contributing to achieving the continued net self-sufficiency in hazardous waste management capacity. (83)

6.4.4 Therefore, a matter fundamental to the central achievement of the Plan is the identification of a suitable location for the treatment or disposal of the hazardous waste residues within Kent. No site for the treatment of this waste was submitted to the County Council in response to the call for sites in 2010 and only one site was put

forward for its disposal. The submission for hazardous waste disposal was for an extension to the existing facility at Norwood Quarry, which benefits from suitable geology for engineering a hazardous landfill. Norwood Quarry is also the only site put forward in the 2010 call for sites for clay extraction for engineering purposes, that would enable a continuation of supply in Kent and, thereby, the need to restore the land with waste.

~~6.4.35~~ There are no realistic alternatives to the disposal of the Allington EfW flue ash in landfill for the foreseeable future. While there is a risk that identifying the extension area at Norwood Quarry as a Strategic Site for Waste could hinder the development of alternative treatment solutions for the flue ash, there is a need to make provision for this waste stream.

~~6.4.46~~ The proposed extension areas to Norwood Landfill are identified as the Strategic Site for Waste. The location of these extension areas is shown on Figure 19.

Policy CSW5

Strategic Site for Waste

The proposed extension areas for Norwood Quarry and Landfill Site, Isle of Sheppey are together identified as the Strategic Site for Waste in Kent. The site location is shown on Figure 19. Planning permission will not be granted for any other development other than mineral working with restoration through the landfilling of hazardous (flue) dust ash residues from Energy from Waste plants in Kent, ~~unless it can be demonstrated that the equivalent capacity for treatment or disposal can be provided elsewhere in Kent.~~

Mineral working and restoration by hazardous landfill and any ancillary treatment plant at the Strategic Site for Waste will be permitted subject to meeting the requirements of the development plan and the following criteria:

1. Demonstration that the site can be suitably restored in the event that landfilling of hazardous (flue) dust ash residues from Energy from Waste plants were to cease before completion of the final landform due to changes in treatment capacity and/or government policy that may result in the diversion of these wastes from landfill. ~~an assessment has been made that alternative treatment technologies for hazardous flue dust from Energy from Waste plants are not economically viable~~

2. an air quality assessment is made of the impact of the proposed development and its associated traffic movements (84) on the Medway Estuary and Marshes Special Protection Area and the Swale Special Protection Area sites and if necessary mitigation measures are required through planning condition and/or planning obligation

3. the site and any associated land being restored to a high quality standard and appropriate after-use that accords with the local landscape character
4. Any proposal for this site would need to consider the requirements of other relevant policies of this Plan and in particular would need to consider any impacts on the A2500 Lower Road. Depending on the nature of any proposal it may be necessary for the developer to make a contribution to the improvement of this road.

6.5 Policy CSW 6: Location of Built Waste Management Facilities

6.5.1 The preference identified in response to earlier consultations during the formulation of the Plan was for a mix of new small and large sites for waste management. This mix gives flexibility and assists in balancing the benefits of proximity to waste arisings while enabling developers of large facilities to exploit economies of scale. National policy recognises that new facilities will need to serve catchment areas large enough to secure the economic viability of the plant and this is particularly relevant when considering the possible sizing and location of facilities required to satisfy the strategic need identified in Policy CSW 7 **any emerging need indicated by monitoring e.g. in the relevant AMR.**

6.5.2 The location of waste sites in appropriate industrial estates was also the preference identified from the consultation. This has the benefit of using previously developed land and enabling waste uses to be located proximate to waste arisings. There is vacant **E**mployment land throughout Kent and its availability is monitored annually by KCC and the district and borough councils. (85) While vacancy rates of premises in industrial estates generally preclude identification of any particular unit, unless it is being promoted by an operator/landowner, whole industrial estates may be identified as suitable locations. It should be appreciated that all industrial estate locations may not be suitable for some types of waste uses, because of their limited size or close proximity to sensitive receptors or high land and rent costs.

6.5.3 There will still be a need for other locations for **C**ertain types of waste or waste management facilities, such as Construction, Demolition and Excavation (CDE) recycling facilities that are often co-located on mineral sites for aggregates or landfills, which are usually found in rural areas. Also, in rural areas where either the non-processed waste arisings or the processed product can be of benefit to agricultural land (as is the case with compost and anaerobic digestion), the most proximate location for the waste management facility **will likely** be within the rural area.

6.5.4 Specific identification of sites for EfW plants will be made regardless of whether the sites are within an appropriate industrial estate because large sites are needed. The protection afforded through policy will prevent these sites from either being developed or partially developed by other uses.

6.5.5 The development of waste management facilities on previously developed land will be given preference over the development of greenfield sites. In particular,

the redevelopment of derelict or contaminated land may involve treatment of soil to facilitate the redevelopment. Also, redundant agricultural or forestry buildings may be suitable for waste uses where such uses are to be located within the rural areas of the county. Waste management facilities located in the Green Belt are generally regarded as inappropriate development. Developers proposing a waste management facility within the Green Belt shall demonstrate the proposed use complies with Green Belt policy (See Policy DM4).

~~6.5.56~~ The development of built waste management facilities on greenfield sites is not precluded. This is because the goal of achieving sustainable development will lead to new development which may incorporate facilities to recycle or process the waste produced on the site, or to generate energy for use on the site.

~~6.5.67~~ Existing mineral and waste management sites may offer good locations for siting certain waste management facilities **and for expansion to deliver further capacity to that which exists** because of their infrastructure and location. In such cases, the developer will need to demonstrate the benefits of co-location such as connectivity with the existing use of the site **while also demonstrating that any cumulative impact is acceptable**. For example, the co-location of CDE recycling (i.e. aggregate recycling) at an aggregate quarry that can enable the blending of recycled and virgin aggregates to increase the marketability of the product **or the addition of a facility that will move waste further up the hierarchy at an existing EfW site**.

~~6.5.8~~ In order to reinforce and maintain a network of facilities across the county (See Figure 16), the Waste Sites Plan will identify suitable development locations and give clear guidance on the type of facility that may be developed in such locations, based on this Plan's vision, strategic objectives and policies. The criteria in Policy CSW 6 will be taken into account when selecting and screening the suitability of sites for identification in the Waste Sites Plan.

~~6.5.79~~ Policy CSW 6 applies to all proposals for built waste management facilities. Sites identified for allocation in the Waste Sites Plan will be assessed for their suitability to accommodate certain types of waste management facility and therefore certain sites may only accommodate certain types of facility deemed appropriate to that location.

Policy CSW 6

Location of Built Waste Management Facilities

Planning permission will be granted for **proposals that** uses identified as appropriate to the sites allocated in the Waste Sites Plan to meet the need identified in Policy CSW 7 providing that such proposals:

- a) do not give rise to significant adverse impacts upon national and international designated sites, including Areas of Outstanding Natural Beauty (AONB), Sites of Special Scientific Interest (SSSI), Special Areas of Conservation

(SAC), Special Protection Areas (SPAs), Ramsar sites, Ancient Monuments and registered Historic Parks and Gardens. (See Figures 4, 5 & 6).

- b) do not give rise to significant adverse impacts upon Local Wildlife Sites (LWS), Local Nature Reserves (LNR), Ancient Woodland, Air Quality Management Areas (AQMAs) and groundwater resources. (See Figures 7, 8, 10 & 15)
- c) are well located in relation to Kent's Key Arterial Routes, avoiding proposals which would give rise to significant numbers of lorry movements through villages or on unacceptable stretches of road.
- d) do not represent inappropriate development in the Green Belt.
- e) avoid Groundwater Source Protection Zone 1 or Flood Risk Zone 3b.
- f) avoid sites on or in proximity to land where alternative development exists/ has planning permission or is identified in an adopted Local Plan for alternate uses that may prove to be incompatible with the proposed waste management uses on the site.
- g) for energy producing facilities - sites are in proximity to potential heat users.
- h) for facilities that may involve prominent structures (including chimney stacks) - the ability of the landscape to accommodate the structure (including any associated emission plume) after mitigation.
- i) for facilities involving operations that may give rise to bioaerosols (e.g. composting) to locate at least 250m away from any potentially sensitive receptors.

Where it is demonstrated that ~~provision of capacity additional to that required by Policy CSW 7, or that~~ waste will be dealt with further up the hierarchy, or it is replacing capacity lost at existing sites, facilities that satisfy the relevant criteria above on land in the following locations will be granted consent, providing there is no adverse impact on the environment and communities and where such uses are compatible with the development plan:

1. within or adjacent to an existing mineral development or waste management use
2. forming part of a new major development for B8 employment or mixed uses
3. within existing industrial estates
4. other previously developed, contaminated or derelict land not allocated for another use
5. redundant agricultural and forestry buildings and their curtilages

Proposals on ~~a greenfield land other than in the circumstances of category 2 above~~ will only be permitted if ~~either~~:

- A. it can be demonstrated that there are no suitable locations identifiable from categories 1 to 5 above within the intended catchment area of waste arisings, or
- B. Particular regard will be given to whether the nature of the proposed waste management activity requires an isolated location.

[Paragraph 6.6 remains unchanged]

6.7 Policy CSW 7: Waste Management for Non-hazardous Waste

6.7.1 Policy CSW 7 provides a strategy for the provision of new waste management capacity for non-hazardous waste. The policy will **allow** increase the provision of new waste management capacity for recovery while recognising the need to drive waste up the hierarchy.

6.7.2 The term *non-hazardous waste* is regarded, for purposes of the Plan, as being synonymous with MSW (86) and C&I (87) waste **and the non inert, non-hazardous, component of CDEW.**

~~6.7.3 The Needs Assessment for waste facilities (88) shows that there is no lack of capacity preparation of non-hazardous waste for reuse or recycling during the whole of the plan period. However, the Needs Assessment shows a capacity gap emerging in 2024 for treating green and kitchen wastes and Policy CSW 7 therefore seeks to address that gap in provision. The additional capacity required for composting is a minimum but the figure for EfW capacity is a maximum; this reflects the relative positions of these methods of waste management in the Waste Hierarchy. i.e. that it is preferable to process organic waste to produce compost to burning it to produce heat/power. The use of organic waste to produce a gas that may be used as a fuel via anaerobic digestion is also considered preferable to its direct combustion.~~

6.7.4 There is no intention to restrict the amount of new capacity for waste management for recycling or preparation of waste for reuse or recycling, or for the - Furthermore, there is also no intention to restrict provision of the additional capacity of **for** green and/or kitchen waste treatment facilities to the later part of the plan period since the sooner it is delivered, the greater the impact will be on reducing organic waste going to landfill, the most significant source of methane production.

6.7.5 Implementing Policy CSW 7 will result in reducing the amount of Kent non-hazardous waste going for disposal to landfill to less than 76,000 tpa by the end of the plan period. It will also assist in retaining **and by doing so conserve existing non-hazardous landfill capacity in Kent** at the end of the plan period for any non-hazardous waste that cannot be reused, recycled, composted or recovered. The reliance being placed upon a major increase in additional future capacity through the recovery of waste is regarded as being deliverable due to the responses received to the call for sites for the Waste Sites Plan, which include sufficient EfW proposals to meet the required additional capacity.

Policy CSW 7 Waste Management for Non-hazardous Waste

~~In seeking to be as self-sufficient as possible in managing non-hazardous waste arisings in Kent, and for providing for limited amounts of non-hazardous waste from London, sufficient sites for waste management facilities will be identified in the Waste Sites Plan to meet identified needs as a minimum, including the following capacity:~~

- ~~1. Calculation of capacity at any proposed sites may include recycling and composting in an integrated waste management facility providing the total capacity calculated results in no significant amount of residue having to go to non-hazardous landfill. These figures are based on the high growth forecasts.~~
- ~~2. The actual number of facilities required will depend on the throughput capacity of proposed facilities brought forward to meet the identified need. Facilities with a smaller capacity will result in more facilities than indicated being required.~~
- ~~3. Additional capacity required to achieve composting rates of 65% C&I waste and 60% MSW by 2025.~~

~~Waste management capacity for non-hazardous waste will be provided through sites for managing waste, including Energy from Waste, recycling, in-vessel (enclosed) composting facilities and anaerobic digestion plants. Sites for anaerobic digestion, composting, Energy from Waste, mechanical biological treatment and other energy and value recovery technologies that assist Kent in meeting the capacity gap identified in this policy **continuing to be net self sufficient while providing for a reducing quantity of London's waste**, will be granted planning permission provided that:~~

- ~~1. **it moves waste up the hierarchy**, pre-sorting of the waste is carried out unless proven not to be technically practicable for that particular waste stream~~
- ~~2. recovery of by-products and residues is maximised~~

3. energy recovery is maximised (utilising both heat and power)
4. any residues produced can be managed or disposed of in accordance with the objectives of Policy CSW 2
5. sites for the management of green waste and/or kitchen waste in excess of 100 tonnes per week are Animal By Product Regulation compliant (such as in-vessel composting or anaerobic digestion)
6. sites for small-scale open composting of green waste (facilities of less than 100 tonnes per week) that are located within a farm unit and the compost is used within that unit.

6.8 Policy CSW 8: Other Recovery Facilities for Non-hazardous Waste

~~6.8.1 One of the fundamental aims of the Plan is to reduce the amount of MSW and C&I waste being sent to non-hazardous landfill. There will need to be a substantial increase in waste recovery capacity during the plan period if a rapid shift away from landfill is to occur.~~

~~6.8.2 To give sufficient flexibility for waste management in Kent up to 2030, high growth forecasts used to estimate the amount of additional recovery capacity indicate that 562,000 tpa will be required (as shown in the table in Policy CSW 7). **Proposals for** additional recovery capacity will need to be designed to operate as Waste Directive Framework compliant recovery processes harnessing the **maximum practicable quantity of** energy produced.~~

~~6.8.3 Such capacity might be developed in conjunction with waste processing facilities on the same site, or as standalone plants where the waste is processed to produce a fuel off-site. In order to avoid the risk of under provision by double counting both fuel preparation capacity and fuel use capacity, only one of the two facility contributions will be counted towards **meeting any emerging need identified by annual monitoring in future** the requirement set out in Policy CSW 7. Where fuel preparation takes place as a stand-alone activity, e.g. Mechanical Biological Treatment, the recovery contribution will only be counted as the difference between the input quantity and the output quantity unless the output fuel has a proven market. Where that is the case, if the output fuel is to be used in a combustion plant beyond Kent, then this contribution will also be counted. (89)~~

~~89 For example, if 100 tonnes is fed into the plant: 20 tonnes are lost as moisture; 30 tonnes are diverted as recyclate; 50 tonnes of waste is converted into material that may be suited for use as a fuel. Unless that fuel has a proven market then the contribution counted will be 50 tonnes as the remaining material may end up going to landfill. If the 50 tonnes of fuel goes to a plant built within Kent the recovery contribution will be counted at the combustion plant rather than the fuel preparation plant. If the 50 tonnes of fuel is exported beyond the county then the recovery contribution will be counted at the fuel preparation plant.~~

Policy CSW 8 Other Recovery Facilities for Non-hazardous Waste

~~Sites for additional recovery facilities will be identified in the Waste Sites Plan to~~

~~treat a capacity of 562,500 tonnes per annum.~~

~~Permission will be granted for a maximum of 437,500 tonnes in total capacity until such time that the results of annual monitoring indicate that this restriction would result in the loss of all non-hazardous landfill capacity in the county before the end of the plan period.~~

Facilities using waste as a fuel will only be permitted if they qualify as recovery operations as defined by the Revised Waste Framework Directive¹⁰.

When an application for a combined heat and power facility has no proposals for use of the heat when electricity production is commenced, the development will only be granted planning permission if ~~4.~~ the applicant and landowner enter into a planning agreement to market the heat and to produce an annual public report on the progress being made toward finding users for the heat.

6.9 Policy CSW 9: Non Inert Waste Landfill in Kent

6.9.1 The lack of response to the call for sites for non-hazardous landfill is indicative of a lack of demand by the waste industry to develop non-hazardous landfill. Nevertheless, a proposed development might come forward during the plan period and if so it will be granted permission providing it complies with both Policy CSW 9 and the DM policies in this Plan. In addition, proposed additional capacity for hazardous waste landfill ~~identified in CSW 12~~ will be assessed against this policy.

6.9.2 Following the completion of a non inert waste landfill site, the site will need to be restored and there will be a considerable period of aftercare during which such sites need to be managed in order to prevent unacceptable adverse impacts to the environment. Aftercare management can require new development in order to either prepare the site for re-use or to manage the landfill gas or leachate production. Policy DM 19 sets out the Plan's provisions with regard to restoration, aftercare and after-use.

[Policy CSW 9 remains unchanged]

[Policy CSW 10: Development at Closed Landfill Sites inc para 6.10.1 preamble remain unchanged]

6.11 Policy CSW 11: Permanent Deposit of Inert Waste

6.11.1 **The most recent capacity assessment** ~~Needs Assessment~~ for waste facilities ~~(92)~~ shows that there is currently permitted capacity at permanent CD recycling sites of over 2 mtpa which already exceeds the partially revoked SEP recycling target for the later part of the plan period of 1.56 mtpa. However, the target is only a minimum requirement because ~~it~~ is considered more sustainable to use recycled aggregates than to extract primary aggregates. The term *CD recycling* is

¹⁰ Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives

synonymous with the term *aggregate recycling* and the criteria for assessing further site proposals for such sites can be read in Policy CSM 8: Secondary and Recycled Aggregates in Chapter 5.

6.11.2 The most recent capacity assessment ~~Needs Assessment~~ shows that Kent has existing permitted **consented** inert waste landfill capacity that is more than sufficient to meet Kent's need for the plan period. It is known that Kent receives a lot of waste originating out of the county, particularly from London, which goes into inert waste landfill in Kent. **It has been concluded that** ~~The Needs Assessment~~ tested the effects of this import continuing **continuation of this waste import** throughout the plan period at a rate of 300,000 tpa and concluded that this would still result in a surplus of inert waste landfill capacity of over 10 mt at the end of the plan period **can be accommodated by the existing consented capacity**.

6.11.3 Another important issue is that without the import of inert waste the ability to restore existing permitted mineral workings would take a lot longer. Policy CSW 11: Permanent Deposit of Inert Waste seeks to ensure that a high priority is given to using inert waste that cannot be recycled in the restoration of existing permitted mineral workings, in preference to uses where inert waste is deposited on land (e.g. bund formation or raising land to improve drainage etc).

[Policy CSW11 remains unchanged]

6.12 Policy CSW 12: ~~Identifying Sites for Hazardous Waste~~ Management

6.12.1 Hazardous waste arising in Kent is one of the smaller streams of waste; ~~in 2008 it only accounted for 3.1% of the total waste arising in the county.~~ The management of hazardous waste is typically characterised by the following: **Hazardous** waste is often produced in small quantities **and** hazardous waste management facilities are often highly specialised with regional or even national catchment areas **involving** ~~considerable~~ movement of hazardous waste ~~occurs~~ with both waste originating in Kent going outside the county for management and hazardous waste coming into the county for management.

6.12.2 When hazardous waste management in Kent is viewed as a whole, net self-sufficiency in hazardous waste management is achieved. However, ~~the Hazardous Waste Topic Paper (93)~~ identified that Kent could cease to be net self-sufficient in hazardous waste capacity if changes in the production ~~profile~~ and management **profile** of hazardous waste occur as follows:

- the continued demand for disposal capacity for flue residues from Allington EfW facility
- the likely increase in hazardous residues from air pollution control from additional EfW capacity requiring management
- if the existing asbestos landfill closes then Kent will cease to import a significant amount of asbestos based hazardous waste **will cease to be imported** into the county.

6.12.3 The former issue is partly dealt with through the identification of a Strategic Site for Waste in Policy CSW 5. The need for management capacity of additional EfW APC residues can be addressed through Policy CSW 12 should it be required. Any proposals for future provision for asbestos landfill capacity will be **addressed using by Policy CSW9** through identification of a site in the Waste Sites Plan.

Policy CSW 12

Identifying Sites for Hazardous Waste Management

To maintain net self-sufficiency in the management of hazardous waste throughout the plan period, developments proposals for built hazardous waste management facilities will be granted planning permission in locations specified in consistent with Policy CSW 6, regardless of whether their catchment areas for waste extend outside beyond Kent.

~~A site will also be identified in the Waste Sites Plan for the landfilling of asbestos waste that is consistent with the criteria in Policy CSW 11: Permanent Deposit of Inert Waste to enable the continuation of asbestos disposal within the county.~~

[Policy CSW 13 remains unchanged]

6.14 Policy CSW 14: Disposal of Dredgings

6.14.1 Retaining the navigable channels within the estuaries within Kent is the statutory duty of the Port of London Authority (PLA) and the Medway Ports Authority. When the dredged materials do not consist of aggregates or cannot be accommodated within projects to enhance the biodiversity of the estuaries, then landfill is the only option currently available. ~~A landfill site with river access is needed. A site for the disposal of dredgings will be safeguarded through identification in the Waste Sites Plan.~~

Policy CSW 14

Disposal of Dredgings

~~A site for the disposal of dredgings will be identified in the Waste Sites Plan and the site will be safeguarded from other development.~~ Planning permission will be granted for new sites for the disposal of dredging materials where it can be demonstrated that:

1. the re-use of the material to be disposed of is not practicable
2. there are no opportunities to use the material to enhance the biodiversity of the Kent estuaries

8 Managing and Monitoring the Delivery of the Strategy

[Changes to be made to the monitoring framework to reflect changes to the policies as set out above. This affects monitoring of policies CSW4, CSW6, CSW7, CSW8 and CSW12]

Appendix A: Glossary

Local Plan ~~The Kent MWLP comprises all adopted local plans that will include the Kent MWLP, the Minerals Sites Plan, the Waste Sites Plan and the district local plan.~~ **A Local Plan is a Development Plan Document that includes planning policies for a local area. A Local Plan forms part of the Development Plan for an Area.**

Appendix B: List of Replaced, Deleted and Retained Policies

~~It is KCC's intention to replace a~~ **All** the previously adopted minerals and waste **policies are replaced by** ~~plans with the Kent MWLP 2013-30 and the Minerals and Waste Sites Plans. The Kent Minerals and Waste Plans previously in force are listed below:~~

Kent Minerals Local Plan: Brickearth (1986)
Kent Minerals Local Plan Construction Aggregates (1993)
Kent Minerals Local Plan Chalk and Clay (1997)
Kent Minerals Local Plan Oil and Gas (1997)
Kent Waste Local Plan (1998)

~~All of these plans were prepared before Medway Council was formed and these plans therefore covered areas which are now within Medway.~~

The Secretary of State for the Government Office for the South East wrote separately to both KCC and Medway Council on 21 September 2007 providing a direction on the policies in the previously adopted minerals and waste plans. Any policies not listed by the Secretary of State expired and those listed in the Direction are known as the 'saved policies'. It is the saved policies that are deleted by the Minerals and Waste Plan, and the Minerals and Waste Sites Plans once adopted. KCC and Medway Council have separate letters of direction from the Secretary of State and therefore the deletion of saved policies by KCC has no effect on Medway Council's saved policies.

~~There are five saved policies which will not be deleted until the Minerals and Waste Sites Plans are adopted. These saved policies identify land where it would be considered acceptable in principle for developments as mineral or waste sites.~~

In Appendix B add following text beneath the table entitled 'Saved Policies being Deleted':

Saved Policy CA6 – 'Areas of Search within which the Extraction of minerals is Acceptable in Principle' is deleted and replaced by the Kent Mineral Sites Plan

Saved Policy B1 – 'Locations Suitable in Principle for the Extraction of Brickearth' is deleted.

Insert table in Appendix B under section 'Saved Policies being Deleted':

<u>Kent Waste Local Plan 1998 Saved Policies</u>		
<u>W7</u>	<u>Locations Suitable in Principle for Inert Waste to be Prepared for Recycling or Re-use</u>	<u>Policy deleted</u>
<u>W9</u>	<u>Locations Suitable in Principle for Waste Separation and Transfer Proposals</u>	<u>Policy deleted</u>
<u>W11</u>	<u>Locations with Potential for EfW Proposals</u>	<u>Policy deleted</u>

Modify the table in Appendix B under section 'Saved Policies being Retained' as follows:

Kent Minerals Local Plan: Construction Aggregates 1993 Saved Policy	
CA6	Areas of Search within which the Extraction of minerals is Acceptable in Principle
Kent Waste Local Plan 1998 Saved Policies	
W7	Locations Suitable in Principle for Inert Waste to be Prepared for Recycling or Re-use
W9	Locations Suitable in Principle for Waste Separation and Transfer Proposals
W11	Locations with Potential for EfW Proposals
Kent Minerals Subject Plan: Brickearth 1986 Saved Policy	
B1	Locations Suitable in Principle for the Extraction of Brickearth

[Note that the proposed deletion of saved policies CA6 and B1 is a result of the preparation of the Mineral Sites Plan that will provide updated policy on the allocation of land for minerals extraction]

3.0 Proposed modification to relating to minerals and waste safeguarding: Policies DM 7 and DM 8

3.1 Background

Sections 5.5, 5.6, and 5.7 of the adopted Kent Minerals and Waste Local Plan (KMWLP) set out policies (CSM5, CSM6 and CSM7), with reasoned justification, for the safeguarding of:

1. Land-won minerals (as defined in the Minerals Safeguarding Areas (MSAs)) from needless sterilisation from other development; and,
2. Minerals supply and waste management and transport infrastructure from direct, and potential, loss due to incompatible development being sited nearby such that it has the potential to prejudice their future lawful operation.

Further policies, DM 7 and DM 8, are included to ensure that the safeguarding is not unduly rigid in its application. Policies DM7 and DM8 set out criteria to allow development that may affect safeguarded resources and sites to proceed in certain prescribed circumstances.

Since adoption of the KMWLP, experience in the implementation of the Policies DM7 and DM8 has revealed that ambiguity in the wording of certain of their exempting criteria hinders their effectiveness. Revisions to both policies (as set out below) are therefore proposed to ensure they can be applied effectively in future. Additional wording to the supporting text is also provided to reflect the now adopted status of the related Supplementary Planning Document.

3.2 Policy DM 7 – Safeguarding Mineral Resources

Policy DM 7 sets out the circumstances in which surface non-minerals development may be acceptable at a location within an MSA. This policy recognises that the aim of safeguarding is to avoid unnecessary sterilisation of resources and encourage prior extraction of the mineral where practicable and viable before non-mineral development occurs. The policy in its adopted form reads as below:

Policy DM 7

Safeguarding Mineral Resources

Planning permission will only be granted for non-mineral development that is incompatible with minerals safeguarding where it is demonstrated that either:

- 1. the mineral is not of economic value or does not exist; or**
- 2. that extraction of the mineral would not be viable or practicable; or**
- 3. the mineral can be extracted satisfactorily, having regard to Policy DM9, prior to the non-minerals development taking place without adversely affecting the viability or deliverability of the non-minerals**

development; or

4. the incompatible development is of a temporary nature that can be completed and the site returned to a condition that does not prevent mineral extraction within the timescale that the mineral is likely to be needed; or

5. material considerations indicate that the need for the development overrides the presumption for mineral safeguarding such that sterilisation of the mineral can be permitted following the exploration of opportunities for prior extraction; or

6. it constitutes development that is exempt from mineral safeguarding policy, namely householder applications, infill development of a minor nature in existing built up areas, advertisement applications, reserved matters applications, minor extensions and changes of use of buildings, minor works, non-material amendments to current planning permissions; or

7. it constitutes development on a site allocated in the adopted development plan

Further guidance on the application of this policy will be included in a Supplementary Planning Document.

The particular criterion of concern is criterion 7. The purpose of criterion 7 is to recognise that the process of local plan formulation, consultation, independent examination and subsequent adoption would normally take account of, and address, land won mineral safeguarding matters. In other words, it is assumed that where land is allocated in a Local Plan for surface development, such as housing, the presence of a mineral resource, and the need for its safeguarding, will have been factored into the consideration of whether allocation of that land for development is appropriate. This means that proposals for development on land allocated in Local Plans for a given type of development do not need to consider criteria 1 to 6.

Where economic minerals are identified in an MSA whose extent coincides with allocations for non-mineral development that would have a potentially sterilising effect on these mineral resources, then a full assessment that meets the other criteria 1 to 6 (where appropriate) of the policy should be completed, to the satisfaction of the Mineral Planning Authority (MPA).

However, application of the policy has revealed that sterilising development is being proposed on land allocated in a Local Plan, that is also within an MSA, where the original allocation did not take into account mineral safeguarding. In this regard it has been suggested that the criterion **'it constitutes development on a site allocated in the adopted development plan'** should be interpreted literally, such that provided there is an adopted development plan with allocations, regardless of whether the development is incompatible with the mineral safeguarding principles, development in those areas is, in all cases, exempt from the need to consider safeguarding.

In order to improve the effectiveness of criterion 7 (and to close this 'loop hole') revised wording is therefore proposed. Furthermore, amendments are also proposed to reflect the now adopted status of the Supplementary Planning Document on Safeguarding:

Policy DM 7

Safeguarding Mineral Resources

Planning permission will only be granted for non-mineral development that is incompatible with minerals safeguarding where it is demonstrated that either:

- 1. the mineral is not of economic value or does not exist; or**
- 2. that extraction of the mineral would not be viable or practicable; or**
- 3. the mineral can be extracted satisfactorily, having regard to Policy DM9, prior to the non-minerals development taking place without adversely affecting the viability or deliverability of the non-minerals development; or**
- 4. the incompatible development is of a temporary nature that can be completed and the site returned to a condition that does not prevent mineral extraction within the timescale that the mineral is likely to be needed; or**
- 5. material considerations indicate that the need for the development overrides the presumption for mineral safeguarding such that sterilisation of the mineral can be permitted following the exploration of opportunities for prior extraction; or**
- 6. it constitutes development that is exempt from mineral safeguarding policy, namely householder applications, infill development of a minor nature in existing built up areas, advertisement applications, reserved matters applications, minor extensions and changes of use of buildings, minor works, non-material amendments to current planning permissions; or**
- 7. it constitutes development on a site allocated in the adopted development plan where consideration of the above factors (1-6) concluded that mineral resources will not be needlessly sterilised.**

Further guidance on the application of this policy ~~is~~ will be included in a Supplementary Planning Document.

3.3 Policy DM 8 - Safeguarding Minerals Management, Transportation Production & Waste Management Facilities

Permitted waste management and minerals supply infrastructure plays a crucial role in ensuring the effective management of waste and supply of minerals in the county and is safeguarded from development which may adversely impact on its effective operation. Certain types of non-waste and minerals development which may be sensitive to noise, dust and visual impacts associated with infrastructure (e.g. housing) may not always be compatible. Policies CSM6 and CSM7 therefore expect the presence of waste and minerals infrastructure to be taken into account in decisions on proposals for non-waste and minerals development made in the vicinity of such infrastructure.

Policy DM 8 recognises that in certain circumstances redevelopment of sites hosting waste and minerals infrastructure, or nearby non minerals and waste development, may be acceptable. Policy DM8 allows such development when a replacement facility is identified that is at least equivalent to that which it is replacing and it specifies how this should be assessed. The policy in its adopted form reads as follows:

Policy DM 8 - Safeguarding Minerals Management, Transportation Production & Waste Management Facilities

Planning permission will only be granted for development that is incompatible with safeguarded minerals management, transportation or waste management facilities, where it is demonstrated that either:

- 1. it constitutes development of the following nature: advertisement applications; reserved matters applications; minor extensions and changes of use and buildings; minor works; and non-material amendments to current planning permissions; or**
- 2. it constitutes development on the site that has been allocated in the adopted development plan; or**
- 3. replacement capacity, of the similar type, is available at a suitable alternative site, which is at least equivalent or better than to that offered by the facility that it is replacing; or**
- 4. it is for a temporary period and will not compromise its potential in the future for minerals transportation; or**
- 5. the facility is not viable or capable of being made viable; or**
- 6. material considerations indicate that the need for development overrides the presumption for safeguarding; or**
- 7. It has been demonstrated that the capacity of the facility to be lost is not required.**

Replacement capacity must be at least equivalent in terms of tonnage, accessibility, location in relation to the market, suitability, availability of land

for processing and stockpiling of waste and minerals, and: in the case of wharves, the size of the berth for dredgers, barges or ships in the case of waste facilities, replacement capacity must be at least at an equivalent level of the waste hierarchy and capacity may be less if the development is at a higher level of the hierarchy.

Criterion 2 of the policy has the same wording as criterion 7 of Policy DM 7 and the issue regarding the effectiveness of Policy DM7 (as set out above) therefore also applies to Policy DM8. Therefore, in order to ensure that Policy DM8 is effective in its consideration of non-minerals and waste development proposed on sites allocated in adopted local plans the following wording is proposed:

Policy DM 8 - Safeguarding Minerals Management, Transportation Production & Waste Management Facilities

Planning permission will only be granted for development that is incompatible with safeguarded minerals management, transportation or waste management facilities, where it is demonstrated that either:

1. it constitutes development of the following nature: advertisement applications; reserved matters applications; minor extensions and changes of use and buildings; minor works; and non-material amendments to current planning permissions; or

2. it constitutes development on the site that has been allocated in the adopted development plan where consideration of the other criteria (1, 3-7) can be demonstrated to have taken place in formulation of the plan and allocation of the site which concluded that the safeguarding of minerals management, transportation production and waste management facilities has been fully considered and it was concluded that certain types non-mineral and waste development in those locations would be acceptable; or

3. replacement capacity, of the similar type, is available at a suitable alternative site, which is at least equivalent or better than to that offered by the facility that it is replacing; or

4. it is for a temporary period and will not compromise its potential in the future for minerals transportation; or

5. the facility is not viable or capable of being made viable; or

6. material considerations indicate that the need for development overrides the presumption for safeguarding; or

7. It has been demonstrated that the capacity of the facility to be lost is not required.

Replacement capacity must be at least equivalent in terms of tonnage, accessibility, location in relation to the market, suitability, availability of land for processing and stockpiling of waste (and materials/residues resulting from waste management processes) and minerals, and:

- in the case of wharves, the size of the berth for dredgers, barges or ships
- in the case of waste facilities, replacement capacity must be at least at an equivalent level of the waste hierarchy and capacity may be less if the development is at a higher level of the hierarchy.

There must also be no existing, planned or proposed developments that could constrain the operation of the replacement site at the required capacity.

Planning applications for development within 250m of safeguarded facilities need to demonstrate that impacts, e.g. noise, dust, light and air emissions, that may legitimately arise from the activities taking place at the safeguarded sites would not be experienced to an unacceptable level by occupants of the proposed development and that vehicle access to and from the facility would not be constrained by the development proposed.

Further guidance on the application of this policy will be included in a Supplementary Planning Document.

In light of the above it is proposed that related explanatory text of the KMWLP be modified as set out below.

7.5 Policy DM 7: Safeguarding Mineral Resources

7.5.1 As set out in section 5.5, it is important that certain mineral resources in Kent are safeguarded for potential use by future generations. However, from time to time, proposals to develop areas overlying safeguarded minerals resources for non-minerals purposes will come forward. The need for such development will be weighed against the need to avoid sterilisation of the underlying mineral and the objectives and policies of the development plans as a whole will need to be considered when determining proposals.

7.5.2 Policy DM 7 sets out the circumstances when non-minerals development may be acceptable at a location within a Minerals Safeguarding Area. This policy recognises that the aim of safeguarding is to avoid unnecessary sterilisation of resources and encourage prior extraction of the mineral where practicable and viable before non-mineral development occurs.

7.5.3 Proposals located in MSAs will usually need to be accompanied by a 'Minerals Assessment', prepared by the promoter, which will include information concerning

the availability of the mineral, its scarcity, the timescale for the development, the practicability and the viability of the prior extraction of the mineral. Guidance on undertaking Minerals Assessments is included in the BGS Good Practice Advice on Safeguarding. Further guidance is will be provided through a Supplementary Planning Document. (111)

7.5.4 Where proposals are determined by a district/borough planning authority, the Mineral Planning Authority will work with the relevant authority and/or the promoter to assess the viability and practicability of prior extraction of the minerals resource. **As necessary the Minerals Planning Authority will provide information that helps determine the economic viability of the resource.**

7.5.5 In certain cases it is possible that the need for a particular type of development in a particular location is so important that it overrides the need to avoid sterilisation of the safeguarded mineral resource. Such cases will be highly exceptional and it will be necessary to demonstrate the overriding importance of the development, such as whether the development is of strategic national importance, and why the need cannot practically be met elsewhere.

7.5.6 Criterion 7 of Policy DM7 recognises that the allocation of land in adopted Local Plans for non-mineral development, such as housing, should have considered the presence of an economic mineral resource and the need for its safeguarding at this time, and, where that is shown to be the case to the satisfaction of the Mineral Planning Authority, there is no need to revisit mineral safeguarding considerations at the planning application stage. The Mineral Planning Authority and the district/borough planning authority will consider mineral safeguarding during the preparation of Local Plans e.g. during preparation of Strategic Housing Land Availability Assessments.

Footnote 111 Preparation of the Supplementary Planning Document will **be maintained by the County Council and updated as required** involve consultation with stakeholders including the minerals and development industry.

7.6 Policy DM 8: Safeguarding Minerals Management, Transportation, Production & Waste Management Facilities

7.6.1 It is essential to the delivery of this Plan's minerals and waste strategy that existing facilities (113) used for the management of minerals (including wharves and rail depots) and waste are safeguarded for the future, in order to enable them to continue to be used to produce and transport the minerals needed by society and manage its waste.

7.6.2 Policy DM 8 sets out the circumstances when safeguarded minerals and waste development may be replaced by non-waste and minerals uses. This includes ensuring that any replacement facility is at least equivalent to that which it is replacing and it specifies how this should be assessed.

7.6.3 In the case of mineral wharves the factors to be considered include the depths of water at the berth, accessibility of the wharf at various states of the tide, length of the berth, the size and suitability of adjacent land for processing plant, weighbridges and stockpiles, and existing, planned or proposed development that may constrain operations at the replacement site at the required capacity.

7.6.4 There also are circumstances when development proposals in the vicinity of safeguarded facilities will come forward. The need for such development will be weighed against the need to retain the facility and the objectives and policies of the development plan as a whole will need to be considered when determining proposals. Policy DM 8 sets out the circumstances when development may be acceptable in a location proximate to such facilities. The policy recognises that the aim of safeguarding is to avoid development which may impair the effectiveness and acceptability of the infrastructure.

7.6.5 Certain types of development which require a high quality amenity environment (e.g. residential) may not always be compatible with minerals production or waste management activities which are industrial in nature. Policy DM 8 therefore expects the presence of waste and minerals infrastructure to be taken into account in decisions on proposals for non-waste and minerals development (**known as 'agents of change'**) made in the vicinity of such infrastructure.

7.6.6 Criterion 2 of Policy DM8 recognises that the allocation of land in adopted Local Plans for development, such as housing, should have considered the presence of waste management and minerals supply infrastructure and the need for its safeguarding at that time, and, where this has been shown to be the case to the satisfaction of the Mineral Planning Authority, there is no need to revisit the safeguarding considerations at planning application stage.

7.6.7 Further guidance on the implementation of this policy is included in a Supplementary Planning Document.

Appendix 1 - Waste Needs Assessment – Summary of Key Conclusions

A recent review¹¹ of the future needs for waste management facilities in Kent has concluded that the development of the additional capacity is not required to the extent that a separate Waste Sites Plan would be justified. This is for the following reasons:

1. Energy recovery capacity: Additional capacity at Kemsley SEP now confirmed.
2. Hazardous waste: Due to the lack of need for additional capacity to allow for the continued landfilling of projected arisings of asbestos from Kent within Kent.
3. Disposal of Dredgings: No clear need identified by Port of London Authority (PLA) (the responsible navigation authority).

These identified needs i.e. projected capacity deficits, are discussed further below. In addition, while there remains an identified need for organic waste treatment capacity, it is considered that adopted policy in the MWLP is sufficiently permissive and positive enough for applications to be encouraged to come forward without the need for allocation of specific sites.

1. Energy Recovery Capacity.

Table A1 presents the findings of the review in relation to the predicted need for additional Non Hazardous Residual Waste Energy Recovery capacity. Essentially the delivery of the Kemsley SEP now more than fulfils the predicted need.

¹¹ BPP Consulting Kent Waste Needs Assessment 2016-17

Table A1: Projected Overall Non Hazardous Residual Waste Management Needs (tonnes)

	2016	2021	2026	2031
<i>Other Recovery Requirement</i>	666,000	842,000	798,000	751,000
minus Allington capacity	500,000	500,000	500,000	500,000
<i>Remainder</i>	166,000	342,000	298,000	251,000
minus Kemsley capacity at 2020	0	525,000	525,000	525,000
<i>Other Recovery capacity gap shortfall (+ve) / surplus (-ve)</i>	-	-183,000	-227,000	-274,000
Residual Waste from London combining projected exports and Kent waste to Rainham LF¹²	34,500	54,500	54,500	55,000
<i>Remaining Other Recovery Capacity Gap shortfall (+ve) / surplus (-ve)</i>	-	-128,500	-172,500	-219,000

2. Hazardous waste

The approach taken in the adopted KMWLP includes a commitment to maintaining net self-sufficiency for hazardous waste management as stated in Policy CSW12. In reality, application of the principle of net self-sufficiency does not require capacity to be provided to manage every tonne of every waste stream within the Plan Area, rather than an equivalent tonnage be managed. This is particularly the case when considering hazardous waste management capacity as hazardous waste is a heterogeneous waste stream within which particular waste types may have very specific management needs. This 'special case' is recognised by national policy.

In the case of Kent, the Needs Assessment review found that there is currently a reasonably good match between types of hazardous waste produced and management capacity. However, provision of capacity to manage asbestos and air pollution control (APC) residues requires particular attention given that current

¹² The closure date of Rainham Landfill has been extended to 2026 by planning permission granted in September 2016. It should also be noted that a further permission has been granted to operate a "soil repair centre" to the end of 2031. This facility might accept the principal type of Kent waste deposited at the landfill, sewage screenings, and hence continue to provide for that Kent waste for the full plan period. This indicates that the additional provision for Kent waste predicted to be displaced from Rainham might be dispensed with entirely.

capacity for both is in the form of landfill void which by definition is a finite and diminishing resource.

Since the implementation of the Landfill Directive, hazardous waste can only be disposed either to a dedicated hazardous waste landfill site or into a special cell within a non-hazardous waste landfill site. The only two operational landfill sites in Kent accepting hazardous waste are as follows:

1. Norwood Quarry: Restricted input receiving Allington EfW residues to restore clay working.
2. Pinden Quarry: Merchant site accepting asbestos based waste mixed with inert material to restore chalk quarry working.

Provision has already been made in the KMWLP for the continued disposal of Allington EfW APC residues to Norwood Farm landfill, by identifying an extension as a strategic site in Policy CSW 5.

Data obtained for remaining void at Pinden Quarry Landfill suggests that, if inputs of asbestos waste were limited to an amount equivalent to the arisings in Kent over the plan period then there is likely to be sufficient capacity.

It should be noted that the approach taken in the adopted KMWLP was informed by the fact that a proposal to include an extension to Pinden Quarry Landfill as an allocation was put forward by the operator during the first call for sites in 2012. However, no such proposal was put forward in response to the second call for sites in 2016-2017. Nor has an application been forthcoming. It is therefore considered that the identification of a specific additional landfill for hazardous waste (asbestos CDEW) to manage Kent arisings (c 7,000tpa) is not justified.

3. Disposal of Dredgings

As dredgings are a specialist waste being generated solely from the dredging of navigable waterways undertaken by the Port of London Authority (PLA) that has responsibility for maintaining the Thames. The PLA was therefore approached to confirm its need for additional landfill capacity and it confirmed that there was no need for a specific landfill to be identified in the Plan at this time. On the basis of this it is now considered that the need for landfill initially identified no longer exists and dredging are now being managed through other more sustainable means.

Appendix 2 – Clean Copy of Proposed Modifications

Assuming the proposed modifications are adopted, the Kent Minerals and Waste Local Plan 2013-30 would read:

Proposed Modifications to Text of the Kent Minerals and Waste Local Plan Concerning Waste Management

1 Introduction

1.1.3 The specific sites for mineral developments will be set out in the separate Kent Minerals Sites Plan. The site selection process for the final sites included in the Minerals Sites Plan will be based on the policies in the Kent MWLP.

.....

1.2.2 The policies in this Plan replace the earlier versions of the saved Kent Minerals and Waste Local Plan policies. Appendix B lists the schedules of saved Kent Local Plan policies replaced, deleted or retained.

6 Delivery Strategy for Waste

[Policy CSW1 and para 6.1.1- 6.1.2 remain unchanged]

6.2 Policy CSW 2: Waste Hierarchy and Policy CSW 3: Waste Reduction

6.2.1 It is Government policy to break the link between economic growth and the environmental impact of waste by moving the management of waste up the Waste Hierarchy, as shown in Figure 18. (75)

[Figure 18 Waste Hierarchy remains unchanged]

6.2.2 The Kent MWLP mainly implements this policy through influence over waste and minerals developments. However, the Plan also includes a policy (Policy CSW 3) seeking to influence/reduce waste arising from all forms of development. The Kent MWLP forms part of the development plan, along with the district local plans, and is therefore relevant to the determination of planning applications for all forms of development in Kent.

6.2.3 In accordance with the Waste Hierarchy, the Plan gives priority to planning for waste management developments that prepare waste for re-use or recycling. The most recent assessment of waste management capacity requirements⁽⁷⁶⁾ shows that Kent's current recycling and processing facilities have sufficient capacity for the

anticipated rate of usage with the exception of facilities for green and kitchen wastes. It should be appreciated that these calculations are based upon a rate of use that should only be regarded as a minimum, as the aspiration is to encourage more of the waste that is produced in Kent to be managed by methods at this tier of the hierarchy.

6.2.4 Encouraging more waste to be managed via re-use or recycling will be achieved by enabling policies for the development of additional waste management capacity for recycling and processing including a policy presumption to grant planning permission for redevelopment or extensions to lawful existing waste management facilities to enable more waste to be recycled or processed for re-use providing the proposal is in accordance with the locational and development management policies in the Plan.

6.2.5 The application of the Waste Hierarchy is a legal requirement under the Waste (England and Wales) Regulations 2011. It is anticipated that there will be a transition over time to forms of waste management at the higher end of the Waste Hierarchy. The Kent MWLP addresses this transition by seeking to rapidly provide a more sustainable option for the mixed non-hazardous waste that is going to landfill by applying ambitious but achievable landfill diversion targets presented in Policy CSW 4.

Footnote 76 BPP Consulting Waste Needs Assessment 2018.

[Policies CSW 2 and CSW 3 remain unchanged]

6.3 Policy CSW 4: Strategy for Waste Management Capacity

Net Self-sufficiency and Waste Movements

6.3.1 Kent currently achieves net self-sufficiency in waste management capacity for all waste streams. I.e. the annual capacity of the waste management facilities (excluding transfer) in Kent is sufficient to manage the equivalent quantity of waste to that predicted to arise in Kent. The continued achievement of net self-sufficiency and the management of waste close to its source are key Strategic Objectives of the Kent MWLP, because it shows that Kent is not placing any unnecessary burden on other WPAs to manage its waste. Net self-sufficiency recognises that existing (and future) waste management capacity within Kent may not necessarily be for the exclusive management of Kent's waste. Moreover, proposals that would result in more waste being managed in Kent than is produced may be acceptable if they resulted in waste moving up the hierarchy. Achievement of net self-sufficiency is the baseline aspiration and can be monitored on an annual basis and will provide an indicator as to whether the policies in the Plan need to be reviewed. The purpose in adopting the principle of net self-sufficiency is not to restrict the movement of waste as such restriction of waste catchment areas could have an adverse effect upon the

viability of the development of new waste management facilities needed to provide additional capacity for Kent's waste arisings.

6.3.2 In reality, different types of waste are managed at different types of facilities. To assess the future needs for waste facilities in Kent, net self-sufficiency has been studied for the individual waste streams of inert, non-inert (also called non-hazardous) and hazardous wastes. While Kent currently achieves net self-sufficiency, this position will be monitored to ensure this remains the case throughout the plan period. The purpose in adopting the principle of net self-sufficiency is not to restrict the movement of waste as such restriction of waste catchment areas could have an adverse effect upon the viability of the development of additional waste management capacity.

Provision for Waste From London

6.3.3 Specific provision in the calculations for capacity required for non-hazardous waste going to landfill or EfW has been made for waste from London. The reason for this is that due to land constraints London's residual waste cannot all be managed within London itself and so, as a neighbouring waste planning authority, Kent County Council has some responsibility to make provision for an element of this waste. Historical data indicates the tonnage to be provided for is in the region of 35,000 tonnes per annum. It is also recognised that closure of Rainham Landfill in the London Borough of Havering in 2026 may result in the displacement of waste from Kent currently managed there. Therefore, an additional tonnage of 20,000 tpa has been planned for on a contingency basis.

6.3.4 An assessment has been made of the current profile of management of the principal waste streams. The targets applied reflect ambitious (but realistic) goals for moving waste up the hierarchy and seek to ensure that the maximum quantity of non-hazardous waste is diverted from landfill.

Policy CSW 4

Strategy for Waste Management Capacity

The strategy for waste management capacity in Kent is to provide sufficient waste management capacity to manage at least the equivalent of the waste arising in Kent plus some residual non-hazardous waste from London. As a minimum it is to achieve the targets set out below for recycling and composting and other forms of recovery.

	<u>Milestone Year</u>			
	<u>2015/16</u>	<u>2020/21</u>	<u>2025/26</u>	<u>2030/31</u>
<u>Local Authority Collected Waste</u>				
<u>Recycling/composting¹³</u>	<u>n/a</u>	<u>50%</u>	<u>55%</u>	<u>60%</u>
<u>Other Recovery</u>	<u>n/a</u>	<u>48%</u>	<u>43%</u>	<u>38%</u>
<u>Remainder to Landfill</u>	<u>n/a</u>	<u>2%</u>	<u>2%</u>	<u>2%</u>
<u>Commercial & Industrial Waste</u>				
<u>Recycling/composting¹⁴</u>	<u>n/a</u>	<u>50%</u>	<u>55%</u>	<u>60%</u>
<u>Other Recovery</u>	<u>n/a</u>	<u>35%</u>	<u>32.5%</u>	<u>30%</u>
<u>Remainder to Landfill</u>	<u>n/a</u>	<u>15%</u>	<u>12.5%</u>	<u>10%</u>
<u>Construction & Demolition Waste (Non-Inert Only)</u>				
<u>Recycling</u>	<u>n/a</u>	<u>12%</u>	<u>13%</u>	<u>14%</u>
<u>Composting</u>	<u>n/a</u>	<u>1%</u>	<u>1%</u>	<u>1%</u>
<u>Other Recovery</u>	<u>n/a</u>	<u>5%</u>	<u>5%</u>	<u>5%</u>
<u>Remainder to Landfill</u>	<u>n/a</u>	<u>2%</u>	<u>1%</u>	<u>0.5%</u>

It should be noted that the values shown for 'Remainder to Landfill' are not targets but are included to show the predicted requirement for landfill in light of the achievement of the targets to move waste up the waste hierarchy.

6.4 Policy CSW 5: Strategic Site for Waste

6.4.1 To meet the Kent MWLP objective of reducing the amount of waste being landfilled, the Plan is using policies to drive a major change in the way that waste is managed in Kent. Enabling the change in perception of waste from being something

¹³ This is taken to include organic waste (including green and kitchen waste) treatment by Anaerobic Digestion

¹⁴ This is taken to include organic waste (including green and kitchen waste) treatment by Anaerobic Digestion

that has to be disposed to something that can be used as a resource will be helped by the development of such additional capacity further up the hierarchy.

6.4.2 The landfill at Norwood Quarry on the Isle of Sheppey accommodates the hazardous flue ash residues from the Allington EfW facility that features heavily in the Waste Management Unit (WMU) contracts for residual MSW, but it has limited consented void space remaining. To make provision for this waste for the duration of the Plan an extension to Norwood Quarry is identified. Enabling the continued management of hazardous flue ash within Kent has the added benefit of contributing to achieving net self-sufficiency in hazardous waste management capacity. ⁽⁸³⁾

6.4.3 While there is a risk that identifying the extension area at Norwood Quarry as a Strategic Site for Waste could hinder the development of alternative treatment solutions for the flue ash, there is a need to make provision for this waste stream.

6.4.4 The proposed extension areas to Norwood Landfill are identified as the Strategic Site for Waste. The location of these extension areas is shown on Figure 19.

Policy CSW5

Strategic Site for Waste

The proposed extension areas for Norwood Quarry and Landfill Site, Isle of Sheppey are together identified as the Strategic Site for Waste in Kent. The site location is shown on Figure 19. Planning permission will not be granted for any other development other than mineral working with restoration through the landfilling of hazardous (flue) dust ash residues from Energy from Waste plants.

Mineral working and restoration by hazardous landfill and any ancillary treatment plant at the Strategic Site for Waste will be permitted subject to meeting the requirements of the development plan and the following criteria:

1. Demonstration that the site can be suitably restored in the event that landfilling of hazardous (flue) dust ash residues from Energy from Waste plants were to cease before completion of the final landform due to changes in treatment capacity and/or government policy that may result in the diversion of these wastes from landfill.
2. an air quality assessment is made of the impact of the proposed development and its associated traffic movements ⁽⁸⁴⁾ on the Medway Estuary and Marshes Special Protection Area and the Swale Special Protection Area sites and if necessary mitigation measures are required through planning condition and/or planning obligation
3. the site and any associated land being restored to a high-quality standard and appropriate after-use that accords with the local landscape character
4. Any proposal for this site would need to consider the requirements of other relevant policies of this Plan and in particular would need to consider any impacts on the A2500 Lower Road. Depending on the nature of any proposal it may be necessary for the developer to make a contribution to the

improvement of this road.

6.5 Policy CSW 6: Location of Built Waste Management Facilities

6.5.1 The preference identified in response to earlier consultations during the formulation of the Plan was for a mix of new small and large sites for waste management. This mix gives flexibility and assists in balancing the benefits of proximity to waste arisings while enabling developers of large facilities to exploit economies of scale. National policy recognises that new facilities will need to serve catchment areas large enough to secure economic viability and this is particularly relevant when considering the possible sizing and location of facilities required to satisfy any emerging need indicated by monitoring e.g. in the relevant AMR.

6.5.2 The location of waste sites in appropriate industrial estates was also the preference identified from the consultation. This has the benefit of using previously developed land and enabling waste uses to be located proximate to waste arisings. Employment land availability is monitored by KCC and the district and borough councils. (85) It should be appreciated that all industrial estate locations may not be suitable for some types of waste uses, because of their limited size or close proximity to sensitive receptors or high land and rent costs.

6.5.3 Certain types of waste or waste management facilities, such as Construction, Demolition and Excavation (CDE) recycling facilities are often co-located on mineral sites for aggregates or landfills, which are usually found in rural areas. Also, in rural areas where either the non-processed waste arisings or the processed product can be of benefit to agricultural land (as is the case with compost and anaerobic digestion), the most proximate location for the waste management facility will likely be within the rural area.

6.5.4 The development of waste management facilities on previously developed land will be given preference over the development of greenfield sites. In particular, the redevelopment of derelict or contaminated land may involve treatment of soil to facilitate the redevelopment. Also, redundant agricultural or forestry buildings may be suitable for waste uses where such uses are to be located within the rural areas of the county. Waste management facilities located in the Green Belt are generally regarded as inappropriate development. Developers proposing a waste management facility within the Green Belt shall demonstrate the proposed use complies with Green Belt policy (See Policy DM4).

6.5.5 The development of built waste management facilities on greenfield sites is not precluded. This is because the goal of achieving sustainable development will lead to new development which may incorporate facilities to recycle or process the waste produced on the site, or to generate energy for use on the site.

6.5.6 Existing mineral and waste management sites may offer good locations for siting certain waste management facilities and for expansion to deliver further capacity to that which exists because of their infrastructure and location. In such

cases, the developer will need to demonstrate the benefits of co-location such as connectivity with the existing use of the site while also demonstrating that any cumulative impact is acceptable. For example, the co-location of CDE recycling (i.e. aggregate recycling) at an aggregate quarry that can enable the blending of recycled and virgin aggregates to increase the marketability of the product or the addition of a facility that will move waste further up the hierarchy at an existing EfW site.

6.5.7 Policy CSW 6 applies to all proposals for built waste management facilities.

Policy CSW 6

Location of Built Waste Management Facilities

Planning permission will be granted for proposals that:

- a) do not give rise to significant adverse impacts upon national and international designated sites, including Areas of Outstanding Natural Beauty (AONB), Sites of Special Scientific Interest (SSSI), Special Areas of Conservation (SAC), Special Protection Areas (SPAs), Ramsar sites, Ancient Monuments and registered Historic Parks and Gardens. (See Figures 4, 5 & 6).
- b) do not give rise to significant adverse impacts upon Local Wildlife Sites (LWS), Local Nature Reserves (LNR), Ancient Woodland, Air Quality Management Areas (AQMAs) and groundwater resources. (See Figures 7, 8, 10 & 15)
- c) are well located in relation to Kent's Key Arterial Routes, avoiding proposals which would give rise to significant numbers of lorry movements through villages or on unacceptable stretches of road.
- d) do not represent inappropriate development in the Green Belt.
- e) avoid Groundwater Source Protection Zone 1 or Flood Risk Zone 3b.
- f) avoid sites on or in proximity to land where alternative development exists/ has planning permission or is identified in an adopted Local Plan for alternate uses that may prove to be incompatible with the proposed waste management uses on the site.
- g) for energy producing facilities - sites are in proximity to potential heat users.
- h) for facilities that may involve prominent structures (including chimney stacks) - the ability of the landscape to accommodate the structure (including any associated emission plume) after mitigation.

- i) for facilities involving operations that may give rise to bioaerosols (e.g. composting) to locate at least 250m away from any potentially sensitive receptors.

Where it is demonstrated that waste will be dealt with further up the hierarchy, or it is replacing capacity lost at existing sites, facilities that satisfy the relevant criteria above on land in the following locations will be granted consent, providing there is no adverse impact on the environment and communities and where such uses are compatible with the development plan:

1. within or adjacent to an existing mineral development or waste management use
2. forming part of a new major development for B8 employment or mixed uses
3. within existing industrial estates
4. other previously developed, contaminated or derelict land not allocated for another use
5. redundant agricultural and forestry buildings and their curtilages

Proposals on greenfield land will only be permitted if it can be demonstrated that there are no suitable locations identifiable from categories 1 to 5 above within the intended catchment area of waste arisings. Particular regard will be given to whether the nature of the proposed waste management activity requires an isolated location.

[Paragraph 6.6 remains unchanged]

6.7 Policy CSW 7: Waste Management for Non-hazardous Waste

6.7.1 Policy CSW 7 provides a strategy for the provision of new waste management capacity for non-hazardous waste. The policy will allow the provision of new waste management capacity recognising the need to drive waste up the hierarchy.

6.7.2 The term *non-hazardous waste* is regarded, for purposes of the Plan, as being synonymous with MSW (86) and C&I (87) waste and the non inert, non-hazardous, component of CDEW.

6.7.4 There is no intention to restrict the amount of new capacity for waste management for recycling or preparation of waste for reuse or recycling, or for the provision of additional capacity for green and/or kitchen waste treatment since the sooner it is delivered, the greater the impact will be on reducing organic waste going to landfill, the most significant source of methane production.

6.7.5 Implementing Policy CSW 7 will result in reducing the amount of Kent non-hazardous waste going for disposal to landfill and by doing so conserve existing non-hazardous landfill capacity in Kent for any non-hazardous waste that cannot be reused, recycled, composted or recovered.

Policy CSW 7

Waste Management for Non-hazardous Waste

Waste management capacity for non-hazardous waste that assists Kent in continuing to be net self-sufficient while providing for a reducing quantity of London's waste, will be granted planning permission provided that:

1. it moves waste up the hierarchy,
2. recovery of by-products and residues is maximised
3. energy recovery is maximised (utilising both heat and power)
4. any residues produced can be managed or disposed of in accordance with the objectives of Policy CSW 2
5. sites for the management of green waste and/or kitchen waste in excess of 100 tonnes per week are Animal By Product Regulation compliant (such as in-vessel composting or anaerobic digestion)
6. sites for small-scale open composting of green waste (facilities of less than 100 tonnes per week) that are located within a farm unit and the compost is used within that unit.

6.8 Policy CSW 8: Other Recovery Facilities for Non-hazardous Waste

6.8.1 One of the fundamental aims of the Plan is to reduce the amount of MSW and C&I waste being sent to non-hazardous landfill.

Proposals for additional recovery capacity will need to be designed to harness the maximum practicable quantity of energy produced.

Such capacity might be developed in conjunction with waste processing facilities on the same site, or as standalone plants where the waste is processed to produce a fuel off-site. In order to avoid the risk of under provision by double counting both fuel preparation capacity and fuel use capacity, only one of the two facility contributions will be counted towards meeting any emerging need identified by annual monitoring in future. Where fuel preparation takes place as a stand-alone activity, e.g. Mechanical Biological Treatment, the recovery contribution will only be counted as the difference between the input quantity and the output quantity unless the output fuel has a proven market. Where that is the case, if the output fuel is to be used in a combustion plant beyond Kent, then this contribution will also be counted⁸⁹.

Policy CSW 8

⁸⁹ For example, if 100 tonnes is fed into the plant: 20 tonnes are lost as moisture; 30 tonnes are diverted as recyclate; 50 tonnes of waste is converted into material that may be suited for use as a fuel. Unless that fuel has a proven market then the contribution counted will be 50 tonnes as the remaining material may end up going to landfill. If the 50 tonnes of fuel goes to a plant built within Kent the recovery contribution will be counted at the combustion plant rather than the fuel preparation plant. If the 50 tonnes of fuel is exported beyond the county then the recovery contribution will be counted at the fuel preparation plant

Other Recovery Facilities for Non-hazardous Waste

Facilities using waste as a fuel will only be permitted if they qualify as recovery operations as defined by the Revised Waste Framework Directive¹².

When an application for a combined heat and power facility has no proposals for use of the heat when electricity production is commenced, the development will only be granted planning permission if the applicant and landowner enter into a planning agreement to market the heat and to produce an annual public report on the progress being made toward finding users for the heat.

6.9 Policy CSW 9: Non Inert Waste Landfill in Kent

6.9.1 The lack of response to the call for sites for non-hazardous landfill is indicative of a lack of demand by the waste industry to develop non-hazardous landfill. Nevertheless, a proposed development might come forward during the plan period and if so it will be granted permission providing it complies with both Policy CSW 9 and the DM policies in this Plan. In addition, proposed additional capacity for hazardous waste landfill will be assessed against this policy.

6.9.2 Following the completion of a non inert waste landfill site, the site will need to be restored and there will be a considerable period of aftercare during which such sites need to be managed in order to prevent unacceptable adverse impacts to the environment. Aftercare management can require new development in order to either prepare the site for re-use or to manage the landfill gas or leachate production. Policy DM 19 sets out the Plan's provisions with regard to restoration, aftercare and after-use.

[Policy CSW 9 remains unchanged]

[Policy CSW 10: Development at Closed Landfill Sites inc para 6.10.1 preamble remain unchanged.]

6.11 Policy CSW 11: Permanent Deposit of Inert Waste

6.11.1 The most recent capacity assessment shows that there is currently permitted capacity at permanent CD recycling sites of over 2 mtpa. It is considered more sustainable to use recycled aggregates than to extract primary aggregates. The term *CD recycling* is synonymous with the term *aggregate recycling* and the criteria for assessing further site proposals for such sites can be read in Policy CSM 8: Secondary and Recycled Aggregates in Chapter 5.

¹² Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives

6.11.2 The most recent capacity assessment shows that Kent has existing consented inert waste landfill capacity that is more than sufficient to meet Kent's need for the plan period. It is known that Kent receives a lot of waste originating out of the county, particularly from London, which goes into inert waste landfill in Kent. It has been concluded that continuation of this waste import throughout the plan period at a rate of 300,000 tpa can be accommodated by the existing consented capacity.

6.11.3 Another important issue is that without the import of inert waste the ability to restore existing permitted mineral workings would take a lot longer. Policy CSW 11: Permanent Deposit of Inert Waste seeks to ensure that a high priority is given to using inert waste that cannot be recycled in the restoration of existing permitted mineral workings, in preference to uses where inert waste is deposited on land (e.g. bund formation or raising land to improve drainage etc).

[Policy CSW11 remains unchanged]

6.12 Policy CSW 12: Hazardous Waste Management

6.12.1 Hazardous waste arising in Kent is one of the smaller streams of waste. The management of hazardous waste is typically characterised by the following: Hazardous waste is often produced in small quantities and hazardous waste management facilities are often highly specialised with regional or even national catchment areas involving movement of hazardous waste with both waste originating in Kent going outside the county for management and hazardous waste coming into the county for management.

6.12.2 When hazardous waste management in Kent is viewed as a whole, net self-sufficiency in hazardous waste management is achieved. However, Kent could cease to be net self-sufficient in hazardous waste capacity if changes in the production and management profile of hazardous waste occur as follows:

- the continued demand for disposal capacity for flue residues from Allington EfW facility
- the likely increase in hazardous residues from air pollution control from additional EfW capacity requiring management
- if the existing asbestos landfill closes then a significant amount of asbestos based hazardous waste will cease to be imported into the county.

6.12.3 The former issue is partly dealt with through the identification of a Strategic Site for Waste in Policy CSW 5. The need for management capacity of additional EfW APC residues can be addressed through Policy CSW 12 should it be required.

Any proposals for future provision for asbestos landfill capacity will be addressed using Policy CSW9.

Policy CSW 12

Hazardous Waste Management

To maintain net self-sufficiency in the management of hazardous waste throughout the plan period, development proposals for built hazardous waste management facilities will be granted planning permission in locations consistent with Policy CSW 6, regardless of whether their catchment areas for waste extend beyond Kent.

[Policy CSW 13 remains unchanged]

6.14 Policy CSW 14: Disposal of Dredgings

6.14.1 Retaining the navigable channels within the estuaries within Kent is the statutory duty of the Port of London Authority (PLA) and the Medway Ports Authority. When the dredged materials do not consist of aggregates or cannot be accommodated within projects to enhance the biodiversity of the estuaries, then landfill is the only option currently available.

Policy CSW 14

Disposal of Dredgings

Planning permission will be granted for new sites for the disposal of dredging materials where it can be demonstrated that:

1. the re-use of the material to be disposed of is not practicable
2. there are no opportunities to use the material to enhance the biodiversity of the Kent estuaries

8 Managing and Monitoring the Delivery of the Strategy

[Changes to be made to the monitoring framework to reflect changes to the policies as set out above. This affects monitoring of policies CSW4, CSW6, CSW7, CSW8 and, CSW12]

Appendix A: Glossary

Local Plan A Local Plan is a Development Plan Document that includes planning policies for a local area. A Local Plan forms part of the Development Plan for an Area.

Appendix B: List of Replaced, Deleted and Retained Policies

All the previously adopted minerals and waste policies are replaced by the Kent MWLP 2013-30 and the Minerals Sites Plans. The Kent Minerals and Waste Plans previously in force are listed below:

- Kent Minerals Local Plan: Brickearth (1986)
- Kent Minerals Local Plan Construction Aggregates (1993)
- Kent Minerals Local Plan Chalk and Clay (1997)
- Kent Minerals Local Plan Oil and Gas (1997)
- Kent Waste Local Plan (1998)

All of these plans were prepared before Medway Council was formed and these plans therefore covered areas which are now within Medway.

The Secretary of State for the Government Office for the South East wrote separately to both KCC and Medway Council on 21 September 2007 providing a direction on the policies in the previously adopted minerals and waste plans. Any policies not listed by the Secretary of State expired and those listed in the Direction are known as the 'saved policies'. It is the saved policies that are deleted by the Minerals and Waste Plan, and the Minerals Sites Plan once adopted. KCC and Medway Council have separate letters of direction from the Secretary of State and therefore the deletion of saved policies by KCC has no effect on Medway Council's saved policies.

In Appendix B add following text beneath the table entitled 'Saved Policies being Deleted':

Saved Policy CA6 – 'Areas of Search within which the Extraction of minerals is Acceptable in Principle' is deleted and replaced by the Kent Mineral Sites Plan

Saved Policy B1 – 'Locations Suitable in Principle for the Extraction of Brickearth' is deleted.

Insert table in Appendix B under section 'Saved Policies being Deleted':

Kent Waste Local Plan 1998 Saved Policies		
W7	Locations Suitable in Principle for Inert Waste to be Prepared for Recycling or Re-use	Policy deleted
W9	Locations Suitable in Principle for Waste Separation and Transfer Proposals	Policy deleted
W11	Locations with Potential for EfW Proposals	Policy deleted

Proposed modifications relating to minerals and waste safeguarding: Policies DM 7 and DM 8

7.5 Policy DM 7: Safeguarding Mineral Resources

7.5.1 As set out in section 5.5, it is important that certain mineral resources in Kent are safeguarded for potential use by future generations. However, from time to time, proposals to develop areas overlying safeguarded minerals resources for non-minerals purposes will come forward. The need for such development will be weighed against the need to avoid sterilisation of the underlying mineral and the objectives and policies of the development plans as a whole will need to be considered when determining proposals.

7.5.2 Policy DM 7 sets out the circumstances when non-minerals development may be acceptable at a location within a Minerals Safeguarding Area. This policy recognises that the aim of safeguarding is to avoid unnecessary sterilisation of resources and encourage prior extraction of the mineral where practicable and viable before non-mineral development occurs.

7.5.3 Proposals located in MSAs will usually need to be accompanied by a 'Minerals Assessment', prepared by the promoter, which will include information concerning the availability of the mineral, its scarcity, the timescale for the development, the practicability and the viability of the prior extraction of the mineral. Guidance on undertaking Minerals Assessments is included in the BGS Good Practice Advice on Safeguarding. Further guidance is provided through a Supplementary Planning Document. (111)

7.5.4 Where proposals are determined by a district/borough planning authority, the Mineral Planning Authority will work with the relevant authority and/or the promoter to assess the viability and practicability of prior extraction of the minerals resource. As necessary the Minerals Planning Authority will provide information that helps determine the economic viability of the resource.

7.5.5 In certain cases it is possible that the need for a particular type of development in a particular location is so important that it overrides the need to avoid sterilisation of the safeguarded mineral resource. Such cases will be highly exceptional and it will be necessary to demonstrate the overriding importance of the development, such as whether the development is of strategic national importance, and why the need cannot practically be met elsewhere.

7.5.6 Criterion 7 of Policy DM7 recognises that the allocation of land in adopted Local Plans for non-mineral development, such as housing, should have considered the presence of an economic mineral resource and the need for its safeguarding at this time, and, where that is shown to be the case to the satisfaction of the Mineral Planning Authority, there is no need to revisit mineral safeguarding considerations at the planning application stage. The Mineral Planning Authority and the district/borough planning authority will consider mineral safeguarding during the

preparation of Local Plans e.g. during preparation of Strategic Housing Land Availability Assessments.

Footnote 111 The Supplementary Planning Document will be maintained by the County Council and updated as required.

Policy DM 7

Safeguarding Mineral Resources

Planning permission will only be granted for non-mineral development that is incompatible with minerals safeguarding, **(112)** where it is demonstrated that either:

1. the mineral is not of economic value or does not exist; or
2. that extraction of the mineral would not be viable or practicable; or
3. the mineral can be extracted satisfactorily, having regard to Policy DM9, prior to the non-minerals development taking place without adversely affecting the viability or deliverability of the non-minerals development; or
4. the incompatible development is of a temporary nature that can be completed and the site returned to a condition that does not prevent mineral extraction within the timescale that the mineral is likely to be needed; or
5. material considerations indicate that the need for the development overrides the presumption for mineral safeguarding such that sterilisation of the mineral can be permitted following the exploration of opportunities for prior extraction; or
6. it constitutes development that is exempt from mineral safeguarding policy, namely householder applications, infill development of a minor nature in existing built up areas, advertisement applications, reserved matters applications, minor extensions and changes of use of buildings, minor works, non-material amendments to current planning permissions; or
7. it constitutes development on a site allocated in the adopted development plan where consideration of the above factors (1-6) concluded that mineral resources will not be needlessly sterilised.

7.6 Policy DM 8: Safeguarding Minerals Management, Transportation, Production & Waste Management Facilities

7.6.1 It is essential to the delivery of this Plan's minerals and waste strategy that existing facilities (113) used for the management of minerals (including wharves and

rail depots) and waste are safeguarded for the future, in order to enable them to continue to be used to produce and transport the minerals needed by society and manage its waste.

7.6.2 Policy DM 8 sets out the circumstances when safeguarded minerals and waste development may be replaced by non-waste and minerals uses. This includes ensuring that any replacement facility is at least equivalent to that which it is replacing and it specifies how this should be assessed.

7.6.3 In the case of mineral wharves the factors to be considered include the depths of water at the berth, accessibility of the wharf at various states of the tide, length of the berth, the size and suitability of adjacent land for processing plant, weighbridges and stockpiles, and existing, planned or proposed development that may constrain operations at the replacement site at the required capacity.

7.6.4 There also are circumstances when development proposals in the vicinity of safeguarded facilities will come forward. The need for such development will be weighed against the need to retain the facility and the objectives and policies of the development plan as a whole will need to be considered when determining proposals. Policy DM 8 sets out the circumstances when development may be acceptable in a location proximate to such facilities. The policy recognises that the aim of safeguarding is to avoid development which may impair the effectiveness and acceptability of the infrastructure.

7.6.5 Certain types of development which require a high quality amenity environment (e.g. residential) may not always be compatible with minerals production or waste management activities which are industrial in nature. Policy DM 8 therefore expects the presence of waste and minerals infrastructure to be taken into account in decisions on proposals for non-waste and minerals development (known as 'agents of change')_made in the vicinity of such infrastructure.

7.6.6 Criterion 2 of Policy DM8 recognises that the allocation of land in adopted Local Plans for development, such as housing, should have considered the presence of waste management and minerals supply infrastructure and the need for its safeguarding at that time, and, where this has been shown to be the case to the satisfaction of the Mineral Planning Authority, there is no need to revisit the safeguarding considerations at planning application stage.

7.6.7 Further guidance on the implementation of this policy is included in a Supplementary Planning Document.

Policy DM 8

Safeguarding Minerals Management, Transportation Production & Waste Management Facilities

Planning permission will only be granted for development that is incompatible with safeguarded minerals management, transportation or waste management facilities, where it is demonstrated that either:

1. it constitutes development of the following nature: advertisement applications; reserved matters applications; minor extensions and changes of use and buildings; minor works; and non-material amendments to current planning permissions; or
2. it constitutes development on the site that has been allocated in the adopted development plan where consideration of the other criteria (1, 3-7) can be demonstrated to have taken place in formulation of the plan and allocation of the site which concluded that the safeguarding of minerals management, transportation production and waste management facilities has been fully considered and it was concluded that certain types non-mineral and waste development in those locations would be acceptable; or
3. replacement capacity, of the similar type, is available at a suitable alternative site, which is at least equivalent or better than to that offered by the facility that it is replacing; or
4. it is for a temporary period and will not compromise its potential in the future for minerals transportation; or
5. the facility is not viable or capable of being made viable; or
6. material considerations indicate that the need for development overrides the presumption for safeguarding; or
7. It has been demonstrated that the capacity of the facility to be lost is not required.

Replacement capacity must be at least equivalent in terms of tonnage, accessibility, location in relation to the market, suitability, availability of land for processing and stockpiling of waste (and materials/residues resulting from waste management processes) and minerals, and:

- in the case of wharves, the size of the berth for dredgers, barges or ships
- in the case of waste facilities, replacement capacity must be at least at an equivalent level of the waste hierarchy and capacity may be less if the development is at a higher level of the hierarchy

There must also be no existing, planned or proposed developments that could constrain the operation of the replacement site at the required capacity.

Planning applications for development within 250m of safeguarded facilities need to demonstrate that impacts, e.g. noise, dust, light and air emissions, that may legitimately arise from the activities taking place at the safeguarded sites would not be experienced to an unacceptable level by occupants of the proposed development and that vehicle access to and from the facility would not be constrained by the development proposed.

Further guidance on the application of this policy will be included in a Supplementary Planning Document.

Kent Minerals and Waste Local Plan 2013-30

Minerals Sites Plan

Early Partial Review of Kent Minerals and Waste Local Plan 2013-30 – 2018

REVISION TO LOCAL DEVELOPMENT SCHEME

REVISED TIMESCALE

The Local Development Scheme sets out the County Council's programme for preparing minerals and waste planning documents. The current Local Development Scheme, which was adopted in December 2017 anticipated submission of the Plan to the Secretary of State following the pre-submission consultation in January 2019. This needs to be updated to reflect the work of the above and the anticipated date for the Regulation 19 consultation and submission.

The revised timetable for the preparation of the Minerals Sites Plan and KMWLP Partial Review, to be included in the Scheme, is set out in the table below.

Stage	Dates
Second Call for Sites	November 2016 - January 2017
Minerals Sites Options and KMWLP Partial Review Consultation (Reg 18)	December 2017 – March 2018
Pre-Submission Plan Consultation (Reg 19)	December 2018 – February 2019
Submission	March/April 2019
Independent Examination Hearing	June/ July 2019
Inspector's Report	October 2019
Adoption	December 2019

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Summary of Issues Raised in comments on Regulation 18 Consultation of Early Partial Review of the Kent Minerals and Waste Local Plan

1.0 Introduction

Public consultation on proposed changes to policies in the adopted Kent Minerals and Waste Local Plan set out in the Draft Early Partial Review was undertaken between December 2017 and March 2018. The consultation concerned modifications to policies in two areas:

Strategic policies on waste management

- Policies CSW 4, CSW 7, CSW 8 (Non-hazardous waste)
- Policy CSW 12 (Hazardous waste)
- Policy CSW 14 (Disposal of Dredgings)

Policies relating to landwon minerals and minerals and waste management infrastructure safeguarding:

- Policy DM 7 (Safeguarding Mineral Resources)
- Policy DM 8 (Safeguarding Minerals Management, Transportation, Production & Waste Management Facilities)

Eight comments were received on the proposed modifications to policies in the adopted Kent Minerals and Waste Local Plan concerning waste management. In respect of the proposed modifications to the Waste Strategy, comments were received from 7 Stakeholders including 4 businesses and 3 organisations. The County Council received 14 responses in relation to proposed changes to the Mineral and Waste Safeguarding policy. This document provides an overview of the comments that were received, along with the Council's response. This document is based on a more detailed consultation summary document.

2.0 Comments regarding modifications to policies concerning waste management

ISSUE: REMOVAL OF REQUIREMENT TO PREPARE A WASTE SITES PLAN INCLUDING ALLOCATIONS FOR NON-HAZARDOUS WASTE 'OTHER' RECOVERY CAPACITY		
Ref	Summary of comments	KCC Response
1	The data underpinning the partial review underestimates the future need for waste recovery capacity because it:	
1a	- overestimates recycling performance;	Proposed revision to recycling targets have been reviewed and revised in light of current performance for Kent LACW and forthcoming target rates in the EU Circular Economy Package which the UK government has committed to sign up to.
1b	- underestimates baseline arisings due to: 1. failure to account for waste arising in the South East that has not been specifically identified in the Environment Agency Waste Data Interrogator as coming from a particular Waste Planning area and may therefore actually arise in Kent, as Kent is within the former South East region (known as 'non-attributed waste') and 2. the risk that Brexit may bring concerning the continuation of RDF export from Kent ports to mainland Europe;	<p>A spatial analysis of waste arising in the South East but not specifically identified as coming from a particular Waste Planning area has been undertaken. This confirms that the approach of only counting such waste managed at Kent sites is robust.</p> <p>The updated Waste Needs Assessment does consider RDF outputs from Kent sites. Planning for the management of waste above and beyond the quantities produced in Kent such as RDF transported from outside Kent to ports in Kent for export to mainland Europe is not consistent with the adopted Plan's objective of achieving net self-sufficiency. That is to say there is no expectation that the management of a quantity of waste greater than the equivalent tonnage expected to be produced in Kent should be planned for.</p> <p>Moreover a market intelligence review of RDF export arrangements demonstrates that the current flow of RDF from UK to mainland Europe is set to continue for a number of years and certainly beyond the initial Brexit timetable.</p>
1c	- underestimates future arisings due to overly conservative forecasting.	The original forecasts have been reviewed and it is considered that the growth rate used to project future waste arisings is robust. The forecast used allows for an increase in waste production while taking account of a de-coupling between waste arisings and economic growth/household expenditure, as evidenced by recent trends and consistent with approaches promoted by national policy.

		Projections based on short term historical patterns of growth are likely to result in inaccurate forecasts as these will not take account of the variable rates of growth experienced over the full economic cycle of say a decade. Providing on the basis of recent sudden growth may result in over providing excess other recovery capacity which may then draw and lock waste in to a form of management that is below recycling in the Waste Hierarchy.
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ISSUE: REMOVAL OF REQUIREMENT TO PREPARE A WASTE SITES PLAN INCLUDING ALLOCATIONS FOR NON-HAZARDOUS WASTE 'OTHER' RECOVERY CAPACITY		
Ref	Summary of comments	KCC Response
2	The network of waste management infrastructure in Kent should be enhanced to realise associated benefits. For example, incineration with energy recovery facilities provide substantial inward investment, jobs and a supply of renewable/low carbon power and/or heat.	The updated Waste Needs Assessment confirms that there is already sufficient capacity to meet the predicted need for the management of the equivalent tonnage of Kent arisings through recycling/composting and Other Recovery for the Plan period; providing the desired levels of diversion of waste from non-hazardous waste landfill. In particular the updated WNA confirms the finding that there is no identified need for additional EfW or Other Recovery capacity at this time. The WNA shows that the capped requirement for other recovery capacity in the adopted Plan has already been met by the construction of Kemsley SEP. The amended Plan allows for the development of additional capacity that results in waste being managed further up the waste hierarchy. The amended Plan does not rule out the possibility of additional energy recovery capacity being developed, however Government policy and regulations clearly oblige the Authority to give preference to management further up the hierarchy wherever possible with recent suggestion of an incineration tax.

ISSUE: REMOVAL OF REQUIREMENT TO PREPARE A WASTE SITES PLAN INCLUDING PROPOSED ALLOCATIONS FOR GREEN/KITCHEN WASTE TREATMENT CAPACITY		
Ref	Summary of comments	KCC Response
3	The KMWLP Partial Review should acknowledge that additional organic waste treatment capacity is required.	<p>Recycling and Composting is on the same level of the waste hierarchy. The updated Review of Non-Hazardous Waste Recycling/Composting Capacity confirms that the predicted capacity available within Kent will exceed overall recycling and composting requirements by a substantial margin. There is no requirement to specifically provide for a type of capacity given that net self sufficiency is the objective. That is to say organic waste may flow to facilities outside Kent while waste may flow into Kent for recycling, maintaining an overall balance.</p> <p>In any event the amended Plan promotes development of additional capacity (without a cap) that will move waste up the hierarchy so appropriate proposals for the treatment of green and/or kitchen waste will be viewed favourably. The Plan has no preference between composting and anaerobic digestion capacity i.e. is technology neutral with respect to organic treatment capacity, which is consistent with National Policy Practice advice.</p>
ISSUE: REMOVAL OF REQUIREMENT TO PREPARE A WASTE SITES PLAN INCLUDING PROPOSED ALLOCATION FOR ASBESTOS LANDFILL		
Ref	Summary of comments	KCC Response
4	A number of Waste Planning Authorities from whose area asbestos waste went to landfill in Kent previously have made representations expressing concern about the removal of the commitment to allocate a site in Kent for asbestos landfill.	<p>The updated WNA indicates the need for additional asbestos landfill capacity identified in the original Needs Assessment is no longer apparent. In particular the need to accommodate predicted arisings of asbestos waste arising in Kent ¹ indicates that current disposal capacity will be sufficient for the Plan period. Data obtained for remaining void at Pinden Quarry Landfill suggests that, if inputs of asbestos waste were limited to an amount equivalent to the arisings in Kent over the plan period then there is likely to be sufficient capacity. It is therefore considered that the identification of a specific additional landfill for hazardous waste (asbestos CDEW) to manage predicted Kent arisings (c 7,000tpa) is not justified. If industry were to pursue a further site in future, then the criteria-based policy CSW9 (Non Inert Landfill) would allow such a site to be permitted (subject to compliance with development management policies).</p> <p>(It should be noted that the approach taken in the adopted KMWLP was informed by the fact that a proposal to include an extension to Pinden Quarry Landfill as an allocation was put forward by the operator during the first call for sites in 2012.</p>

¹ BPP Consulting Waste Needs Assessment 2018

	<p>This is on the basis that hazardous waste facilities have a wider than local catchment area due to their specialist nature.</p>	<p>However, no such proposal was put forward in response to the second call for sites in 2016-2017. Nor has an application been forthcoming)</p> <p>With respect to the aspiration for maintaining net self sufficiency in hazardous waste management capacity overall this will be met by the Plan's provision of additional hazardous waste landfill capacity (for air pollution control residues) at Norwood Farm. Moreover provision of hazardous waste management capacity is not normally a matter targeted for local self sufficiency. Hence the current objective of seeking to be self-sufficient for this waste stream goes above and beyond national policy expectation.</p> <p>A review of alternative outlets utilised by WPAs expressing concerns indicates that there are a variety of alternative outlets available to accept waste previously accepted at Pinden Quarry , continued availability of which is for those authorities to investigate and establish as part of their waste planning obligation.</p>
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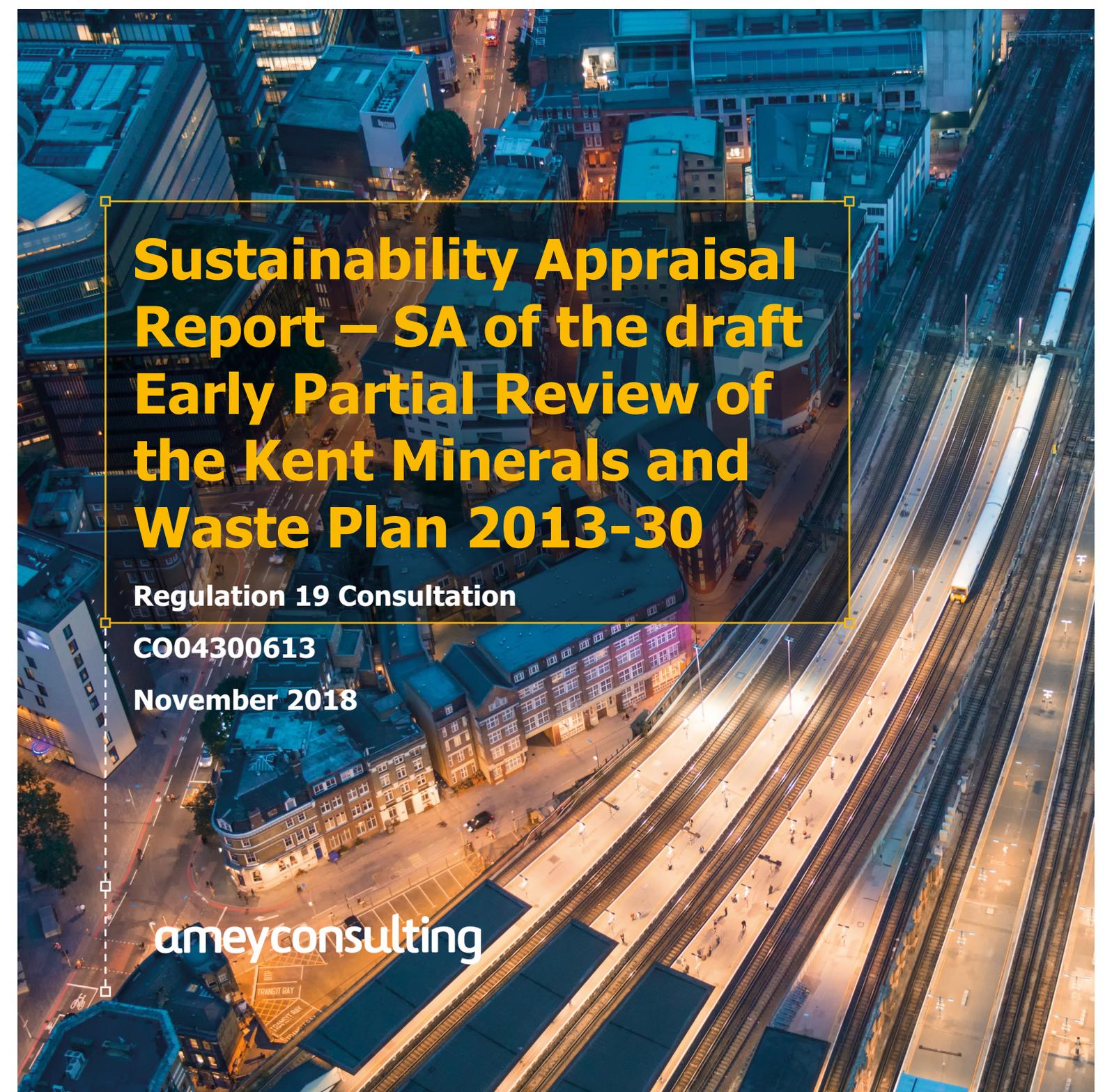
3.0 Comments regarding modifications to policies concerning landwon minerals and minerals and waste management infrastructure safeguarding

ISSUE: CHANGES TO POLICIES DM7 AND DM8 NOT ACCEPTABLE		
Ref	Summary of comments	KCC Response
5	The new wording moves responsibility for assessments to the Local Authority	Minerals considerations should be assessed as any other constraint as part of the Local Plan process. Local Authorities should require developers to submit a minerals assessment as they would a Flood Risk Assessment and send to KCC's Minerals and Waste team for appraisal.
6	The proposed wording may have effects on deliverability of housing allocations in Local Plans; undermine Districts' 5-year housing supply and the viability of housing provision	Mineral safeguarding is an important planning consideration in the determination of planning applications . The NPPF states that safeguarded minerals should not be needlessly sterilised. Minerals assessments would be used to assess whether a site should be exempt from safeguarding, is appropriate for prior extraction or should remain safeguarded. The revised policy wording will ensure that the Mineral Safeguarding matters are properly considered in decision making. Prior extraction and safeguarding will also help the sustainability of housing delivery over plan periods, as it ensures that the required materials to build the planned houses will not be lost.
7	Inconsistencies need rectifying where some parts of the Minerals Safeguarding Areas were amended to avoid housing allocations whereas others did not. The	The proposed policy wording seeks to address the inconsistency in interpretation . The need to review MSAs can be addressed as part of the annual monitoring process. .

	MSAs should be annually reviewed as stated in the MWLP to rectify this	
8	The proposed caveat that allocated sites should consider mineral and waste safeguarding should not be applied retrospectively as these changes would contradict the inspector's modifications at the MWLP's examination that safeguarding policies are not retrospective	The Inspectors comments stated that the original detail in the draft plan would not be needed as it makes the plan 'overly wordy'. Recent evidence has shown this to be erroneous.
9	These changes would contradict the inspector's findings at the recent Maidstone Borough Local Plan's examination, that certain allocations within it did not require minerals assessment due to the lack of market for the mineral	Policy DM7 states that sites are exempt from safeguarding if the promoter can demonstrate that the mineral is not economically viable.
10	KCC have failed to engage with Local Planning Authorities on how successfully applying the safeguarding criteria in their development management decisions would work in practice. KCC should also engage and be engaged earlier in the Local Plan process to determine whether a site is acceptable in Minerals Planning terms	The County Council has prepared a Supplementary Planning Document (SPD) on Safeguarding to address this matter. Prior to its preparation, a workshop was held with Borough Council's in Kent. In light of comments received, the SPD is to be updated and agreed through Statements of Common Ground. Upon request, individual discussions on safeguarding matters on a case by case basis take place between County Council and Borough Council offices.
11	Such a change in policy could render local plan's within Kent 'out of date'	This should not be the case. Local Plans in any event, are required to be reviewed every 5 years. Failure to take safeguarding matters into account in decision and plan making risks unsound planning decisions.

12	Kent County Council should produce evidence providing details of cases whereby it considers the policies to have been ineffective and why	Published as part of Partial Review documents.
13	The wording should be amended to: “(7) it constitutes development on a site allocated in the adopted development plan where consideration of any one of the above factors (1-6) concluded that minerals resources will not be needlessly sterilised.	The current wording makes it clear that one of the criteria being met can allow the site to be exempt.
14	DM8 wording should be amended to: “(2) it constitutes development on the site that has been allocated in the adopted development plan where consideration of any one of the above factors can be documented to have taken place in the formulation of the plan and/or allocation of the site has demonstrably confirmed that the specified which conclude that the safeguarding of minerals management, transportation production and waste management facilities has been fully considered and it was concluded that certain type of non-mineral and waste development in those locations would be acceptable.”	The current wording makes it clear that one of the criteria being met can allow the site to be exempt. The suggested “ <i>Has demonstrably confirmed that the specified</i> type of non-mineral and waste development in those locations would be acceptable” does not provide enough protection to adequately safeguard a site.
15	The Port of London Authority refer to their comments at the Examination of the MWLP.	These comments were considered by the Inspector at the KMWLP Examination. They were incorporated into the Plan at the Main Modifications stage

16	DM7, criteria 7 should be amended to <i>“It constitutes development on a site allocated in the adopted development plan and the applicant is able to demonstrate compliance with criteria 1-6 above.”</i>	The current wording makes it clear that one of the criteria being met can allow the site to be exempt. Does not provide enough protection to adequately safeguard a site if minerals planning points have not been taken into account at allocation.
17	DM8, criteria 2 should be amended to <i>“It constitutes development on a site allocated in the adopted development plan and the applicant is able to demonstrate compliance with criteria 1, 3-7 above”.</i>	The current wording makes it clear that one of the criteria being met can allow the site to be exempt. Does not provide enough protection to adequately safeguard a site if minerals planning points have not been taken into account at allocation.



Sustainability Appraisal Report – SA of the draft Early Partial Review of the Kent Minerals and Waste Plan 2013-30

Regulation 19 Consultation

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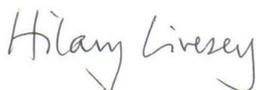
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Document Control Sheet

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Executive Summary

Amey is commissioned to undertake Sustainability Appraisal (SA) in support of the Kent Minerals and Waste Local Plan (KMWLP) Early Partial Review preparation process. This report presents the interim outcomes of this process up to Regulation 19 stage (Pre-submission consultation). The Kent Minerals and Waste Local Plan (KMWLP) was adopted in July 2016 and sets out the vision and objectives for Kent's minerals supply and waste management capacity from 2013 to 2030. The Early Partial Review seeks to amend the KMWLP in several respects:

- The adopted Plan identifies a shortfall in capacity for some types of waste facility over the Plan period, however a review of the future needs for waste management facilities in Kent has recently been undertaken and this has concluded that there is now no need for the development of this additional capacity. Through the Early Partial Review there will be no commitment by Kent County Council to prepare a Waste Sites Plan.
- Two policies in the KMWLP set out criteria to allow development that may affect safeguarded sites to proceed in certain prescribed circumstances. These will be amended by the Early Partial Review to ensure that the Council's safeguarding approach is effective.
- The Early Partial Review proposes to add a clause providing for assurances that the Strategic Site Allocation at Norwood Quarry can be suitably restored in the event that the void space may no longer be used for management of flue dust residues. In addition, it is proposed to delete the requirement for an assessment of alternative management methods for flue ash given that significant tonnages are already being managed through other treatment routes.

Various environmental, social and economic issues have been identified through reviewing a wide variety of plans and strategies, collecting baseline information and identifying sustainability issues and problems. These issues have informed the development of the sustainability appraisal framework, which consists of a set of sustainable development policy objectives as set out in Table 1 of the report. The Early Partial Review has been appraised against this set of sustainability objectives and the findings of that appraisal are as follows.

The Early Partial Review will promote increased reuse, recycling and recovery, which will have climate change benefits and support the move towards a circular economy.

Ensuring restoration of the landfill in the event that insufficient flue-ash is available to complete the landform will help to improve the landscape impacts of the site and remove any amenity impacts on communities from an unrestored site. Restoration plans include biodiversity benefits and these would be secured earlier than with original plans.

Promotion of energy recovery and heat will reduce emissions of greenhouse gases, helping to attenuate the effects of climate change, particularly the pressures resulting on biodiversity and communities including from flood risk. Energy recovery will also recover economic benefits from waste and provide heat for homes and

communities.

Improved safeguarding of mineral resources will help to ensure the availability of aggregates to support housing construction to sustain communities and support economic/industrial activity, although encouraging use of a non-renewable resource is not sustainable. Improved safeguarding of infrastructure for minerals and waste management and transport will also help to support communities and economic/industrial activity and help to ensure the economic transport of materials and availability of sustainable modes of transport.

The SA has considered whether there is scope for making recommendations for measures to prevent, reduced and as fully as possible offset any significant adverse effects of the Early Partial Review. In practice, no significant adverse effects have been identified and therefore no mitigation recommendations are made.

The SA is required to appraise reasonable alternatives to the Early Partial Review as proposed. The reasonable alternatives that have been identified largely derive from a 'do nothing' option, in other words, not to make the changes proposed by the Early Partial Review. The following have been identified as reasonable alternatives to the Early Partial Review, here referred to as 'options'.

Option A

- To allocate land for waste facilities as envisaged in the adopted KMWLP;

Option B

- Option B1: To retain the targets for recycling, recovery and landfill in policy CSW 4 of the adopted KMWLP;
- Option B2: To retain targets for recycling and reduce targets for landfill in policy CSW 4 of the adopted KMWLP;

Option C

- Not to strengthen safeguarding in policies DM 7 and DM 8.

These alternatives have been appraised against this set of sustainability objectives and the findings of that appraisal are set out in the report.

Contents

Executive Summary	1
1. Non-Technical Summary	5
1.1. Background	5
1.2. What is the plan seeking to achieve?	5
1.3. What's the situation now and how would it change without the plan (sustainability 'baseline')?	6
1.4. Characteristics of areas likely to be significantly affected.....	8
1.5. Areas of Particular Environmental Importance	9
1.6. SA Framework and Sustainability Objectives	9
1.7. Likely Significant Effects of the Pre-Submission Early Partial Review	11
1.8. Recommendations for Mitigating Adverse Effects.....	13
1.9. Reasons for Selecting Alternatives Dealt With	13
1.10. Methodology	14
1.11. Monitoring Recommendations	14
2. Introduction	15
2.1. Background	15
2.2. The SA Process.....	15
2.3. Compliance with the SEA Directive and Regulations.....	16
3. The Scope of the Sustainability Appraisal	19
3.1. What is the plan seeking to achieve?.....	19
3.2. What's the sustainability context?.....	21
3.3. What's the situation now and how would it change without the plan (sustainability 'baseline')?	25
3.4. What are the key sustainability issues?	28
3.5. Characteristics of areas likely to be significantly affected.....	30
3.6. Areas of Particular Environmental Importance.....	30
4. How has the plan developed up to this point?.....	32
4.1. Background to the Development of the SA.....	32
4.2. The Development of the Early Partial Review	33
4.3. Difficulties Encountered	35
5. How has the appraisal at this current stage been undertaken? [Sustainability Appraisal Methodology]	37
5.1. SA Framework and Sustainability Objectives	37
5.2. Applying the Framework.....	39
6. Sustainability Appraisal Findings and Recommendations	42
6.1. SA of the Early Partial Review as Proposed	42
6.2. SA of the Alternatives to the Early Partial Review as Proposed.....	43
6.3. Cumulative Effects and Inter-Relationship Between Effects	45

7. How might we monitor the plan’s impacts? 48

8. References..... 49

Appendix A: Summary of Relevant Policy Objectives from National Planning Policy Framework 2018 and A Green Future 50

Appendix B: SA of Policy Changes in Early Partial Review 55

Appendix C: Detailed Findings of Alternatives to Early Partial Review as Proposed..... 76

Appendix D: Contribution of Other Plans and Strategies to Cumulative Effects 88

Tables

Table 1 SA Framework..... 11

Table 2: Summary of Findings of SA of Partial Review Overall 12

Table 4 Requirements of SEA Directive and Compliance of SA Report..... 18

Table 5 Sustainability Objectives established during SA Scoping (Scott Wilson, 2010)..... 32

Table 6 Sustainability Assessment Framework used in SA Report (Consultation Draft) (URS, 2013) 32

Table 7 SA Framework..... 39

Table 8: Summary of Findings of SA of Partial Review Overall 42

Table 9: Monitoring Recommendations 48

Figures

Figure 1 Summary of the parallel planning and SA processes..... 35

Figure 2 Effects categories (URS, 2012) 39

1. Non-Technical Summary

1.1. Background

Amey is commissioned to undertake Sustainability Appraisal (SA) in support of the Kent Minerals and Waste Local Plan (KMWLP) Early Partial Review preparation process. This report presents the interim outcomes of this process up to Regulation 19 stage (Pre-submission consultation). SA is a mechanism for considering and communicating the likely effects of a draft plan, and alternatives, with a view to avoiding and mitigating adverse effects and maximising positives.

1.2. What is the plan seeking to achieve?

The Kent Minerals and Waste Local Plan (KMWLP) was adopted in July 2016 and sets out the vision and objectives for Kent's minerals supply and waste management capacity from 2013 to 2030. The adopted Plan identifies a shortfall in capacity of the following types over the Plan period (to 2030):

- Waste recovery capacity - energy from waste and organic waste treatment;
- Hazardous waste (due to the identified need for additional capacity to allow for the continued landfilling of asbestos)
- Disposal of Dredgings.

Policies CSW 7, CSW 8, CSW 12 and CSW 14 of the KMWLP state that a Waste Sites Plan will be prepared that will identify sites suitable for accommodating facilities needed to address the identified capacity shortfalls. A review of the future needs for waste management facilities in Kent has recently been undertaken and this has concluded that there is now no need for the development of this additional capacity. Through the Early Partial Review there will be no commitment by Kent County Council to prepare a Waste Sites Plan.

Policies DM 7 and DM 8 set out criteria to allow development that may affect safeguarded sites to proceed in certain prescribed circumstances. Policies DM 7 and DM 8 will be amended by the Early Partial Review to ensure that the Council's safeguarding approach is effective.

Policy CSW 5 sets out the criteria to be applied to the assessment of any forthcoming application relating to the Strategic Site Allocation at Norwood Quarry. The Early Partial Review proposes to add a clause providing for assurances that the proposed site can be suitably restored in the event that the void space may no longer be used for management of flue dust residues due to a possible change in government policy. Currently national policy allows landfilling of such waste under a special derogation from the Landfill Directive waste acceptance criteria requirements. This has been subject to review in the past and may change in future. In addition, it is proposed to delete the requirement for an assessment of alternative management methods for flue ash given that significant tonnages are already being managed

through other treatment routes.

In parallel with the development of the Early Partial Review, Kent County Council is also developing a Minerals Sites Plan. This has identified three sites in the county as being suitable for new mineral extraction.

1.3. What's the situation now and how would it change without the plan (sustainability 'baseline')?

The following is a summary of the sustainability baseline characteristics in Kent.

Environmental baseline

- Kent is considered to be one the UK's most wildlife-rich counties. This is a result of its varied geology, long coastline, landscape history and southerly location / proximity to mainland Europe.
- Natura 2000 habitat is concentrated around the coast, particularly around the Thames Gateway (much within Medway UA), the Isle of Thanet, the Stour Estuary and Dungeness. Sites of Special Scientific Interest (SSSI) cover 8.5% of the county. The county contains c.10% of England's ancient woodland.
- The Thames Gateway is also acknowledged for its national importance due to 'brownfield' biodiversity.
- The last century has seen major losses and declines of species within Kent. Amongst the most important drivers of biodiversity loss in Kent are: the direct loss of land of value to wildlife to built-development or intensive farming, which has reduced and fragmented populations; and the effects of climate change.
- Analysis at the County level has informed the location of 16 Biodiversity Opportunity Areas (BOAs) across Kent covering 40% of the land area (BOAs cover 35% of the South East).
- Since 2008 there has been a reduction in carbon dioxide emissions of 0.8 tonnes per capita. Nonetheless, this figure remains higher than regional and national emission levels.
- In 2010 it is estimated that 1050 early deaths occurred as a result of just PM2.5 air pollution across Kent & Medway [KMAQM, 2015]
- Kent is considered to be the most at risk local flood authority in England. Flooding has a significant impact on residents and the economy, with such effects predicted to worsen due to climate change.
- In Kent there are many catchments where there is little or no water available for abstraction during dry periods. Pressures are particularly notable in Kent as it is one of the driest parts of England and Wales, coupled with high population density and household water use. Over the next few decades, there will be increasing pressures from the rising population and associated development. Looking further ahead, climate change could have a major impact on the water that will be available for consumption. [EA, 2012]

Social baseline

- Kent had an estimated population of 1,466,500 in mid-2011. By 2021 the population of Kent is projected to increase by 9.4% from 2012. The age group with the greatest projected percentage change in population is 65+ (21.2%).
- In mid-2011, Kent had the largest rural population of any county in the South East (29%) and identified problems of 'rural deprivation', e.g. associated with access to services, facilities and housing affordability.

- In terms of the 'Index of Multiple Deprivation', Kent ranks within England's least deprived third of authorities. However, significant areas within Kent are amongst England's most deprived 20%. Life expectancy is 8.2 years lower for men and 4.5 years lower for women in the most deprived areas of Kent than in the least deprived areas.
- Early death rates from cancer, heart disease and stroke have fallen and are better than the England average. About 18.4% of Year 6 children are classified as being obese, lower than the average for England. However, estimated levels of adult obesity are worse than the England average.
- Climate change projections highlight an increase in risk to people from flooding; and hotter and sunnier summers leading to public health risks.

Economic baseline

- In 2011, the Gross Domestic Household Income (GDHI) in Kent was £16,855, 5.1% above the UK average, while the South East region was 12.8% above the UK average.
- 2011 was the first year since 2008 that the 'birth' of enterprises in the Kent exceeded the number of 'deaths'.
- During the period October 2011 to September 2012, the employment rate for residents of Kent was 71.1%, a lower figure than that for the South East (74.6%) and close to that for England (70.7%).
- In Kent, the unemployment rate for October 2011 to September 2012 was 7.4% of the population aged 16 years and over; greater than the rate for the South East (5.8%) and close to the rate for England (7.9%).
- The 'public administration, education and health' sector employs the highest proportion of persons aged 16 to 64 (30.7%). Agriculture and fishing employs the lowest proportion of the population aged 16 to 64 (1.6%). These are also the lowest / highest employers at regional and national levels.

How would the baseline would change without the Early Partial Review?

There is a degree of uncertainty about how the baseline might change without the adoption of the Early Partial Review. Developments will still be required to comply with the development management policies of the KMWLP. This includes policies on the protection and enhancement of: biodiversity value, landscape, Green Belt, heritage assets, the water environment, health and amenity (including air quality) and transportation. Long term trends in environmental quality are likely to continue.

However, without the Early Partial Review there is the potential for oversupply in waste capacity as policies in the KMWLP identify a capacity need. This may result in waste being transported from outside the county to provide inputs to waste facilities which will have which will have adverse effects on transport networks, air quality and greenhouse gas emissions.

Without the Early Partial Review it is possible that some mineral resources will be lost to other developments through weaker safeguarding policy. Kent may be less able to provide enough minerals to support the expected future demand for minerals from construction and industry. In such an event, there would be a need to source minerals from elsewhere. This may mean importing minerals from other parts of the country, which will have adverse effects on transport networks, air quality and cost. Alternatively, increased quantities may need to be secured from secondary and recycled aggregates and/or marine dredged aggregates. If sufficient minerals of the right type cannot be found, construction and industrial growth may

be checked. This could lead to insufficient homes being provided with adverse effects on people and communities. Minerals in Kent would not provide sufficient material to support economic growth and industrial activity, in which case employment levels could reduce and GDP and household incomes may fall.

Loss of transport and other infrastructure for minerals and waste without the Early Partial Review is likely to result in materials being transported further with consequent impacts on air quality and transport networks and could result in the loss of sustainable transport modes. This would increase transport and material costs which would adversely affect the profitability of industry. It would also result in loss of capacity and increased demand for new sites.

Without the adoption of the Early Partial Review, emissions of carbon dioxide will be greater than with its adoption. The aim is to reduce the targets for the percentage of waste going to landfill and to manage it at higher levels of the waste hierarchy and to promote the recovery of energy from waste. Without this, there could be increased climate change effects including flooding with risks for communities, wildlife and habitats. Other climate change pressures may be increased with effects on biodiversity and communities, including increased temperatures and more frequent extreme weather events.

Landscape in the locality of the strategic site for waste could be negatively affected if the Early Partial Review is not adopted. If insufficient flue ash is available to restore the landfill, the landfill may not be restored in line with original plans which could have lasting landscape impacts and may affect the amenity of nearby residents.

The social baseline is unlikely to be affected without the adoption of the Early Partial Review. Population, levels of deprivation and health are unlikely to be significantly different with or without the Early Partial Review.

1.4. Characteristics of areas likely to be significantly affected

The SEA Directive requires that the appraisal describes the characteristics of areas likely to be significantly affected by the Early Partial Review. In deciding which areas are likely to be significantly affected, the SA has considered whether there is a spatial element to the proposed policy changes and therefore whether some parts of the county will be particularly affected. There is only one policy with a spatial element and that is the policy relating to Norwood Quarry, the strategic site for waste. The appraisal of the change to this policy has not identified any significant effects arising from change to the policy. It is therefore concluded that there are no areas likely to be significantly affected.

1.5. Areas of Particular Environmental Importance

A Habitats Regulations Assessment has been undertaken for the Early Partial Review¹. This identified that impacts from one strategic site, Norwood Quarry Extension, requires consideration because of the potential for impact on two designated sites:

- Medway Estuary and Marshes SPA and Ramsar;
- Swale SPA and Ramsar

The characteristics of these designated sites are described in detail in Section 3.6 of the main report.

1.6. SA Framework and Sustainability Objectives

Various environmental, social and economic issues have been identified through reviewing a wide variety of plans and strategies, collecting baseline information and identifying sustainability issues and problems. These issues have informed the development of the sustainability appraisal framework, which consists of a set of sustainable development policy objectives (sustainability objectives) as set out in Table 1. Following due diligence in terms of the context and baseline conditions, the Framework and Sustainability Objectives for the SA of the Early Partial Review has been developed using that produced by URS (2013). The relationship between the 2010 Scoping and 2013 SA Report objectives is presented in Table 1 below, which also expands on the detail of the objectives and the additions made following the 2017 Scoping exercise and review of the NPPF 2018 and the 25 Year Environment Plan.

Sustainability Objectives (URS, 2013)	Corresponding SO (Scott Wilson, 2010)	Detail – including additions resulting from MPS SA Scoping (Amey, 2017) and additions resulting from review of NPPF and 25YEP
1 Biodiversity	SO2	<p>Ensure that development will not impact on important elements of the biodiversity resource and where possible contributes to the achievement of the Kent BAP and other strategies</p> <ul style="list-style-type: none"> – Add to the biodiversity baseline by creating opportunities for targeted habitat creation (which, ideally, contributes to local or landscape scale habitat networks). – Avoid hindering plans for biodiversity conservation or enhancement – Support increased access to biodiversity
2 Climate change	SO5	<p>Address the causes of climate change through reducing emissions of greenhouse gases through energy efficiency and energy generated from renewable sources</p> <ul style="list-style-type: none"> – Promote sustainable design and construction of facilities and support wider efforts to reduce the carbon footprint of minerals operations.

¹ Early Partial Review of the Kent Minerals and Waste Local Plan 2013-30 & Kent Mineral Sites Plan: Appropriate Assessment, Ecus Ltd, November 2018

3	Community and well-being	SO9, SO7	<p>Support efforts to create and sustain sustainable communities, particularly the improvement of health and well-being; and support the delivery of housing targets</p> <ul style="list-style-type: none"> – Help to redress spatial inequalities highlighted by the Index of Multiple deprivation. – Help to tackle more hidden forms of deprivation and exclusion, such as that which is experienced in rural areas and particular socio-economic groups within communities. – Ensure that the necessary aggregates are available for building, and that the necessary waste infrastructure is in place to support housing growth – Ensure that minerals development does not contribute to poor air quality particular reference to PM2.5. – Protect and enhance public rights of way and access – Protect local green space
4	Sustainable economic growth	SO11	<p>Support economic growth and diversification</p> <ul style="list-style-type: none"> – Support the development of a dynamic, diverse and knowledge-based economy that excels in innovation with higher value, lower impact activities – Stimulate economic revival and targeted employment generation in deprived areas
5	Flood risk	SO1	<p>Reduce the risk of flooding and the resulting detriment to public wellbeing, the economy and the environment</p> <ul style="list-style-type: none"> – Ensure that development does not lead to increased flood risk on or off site – Seek to mitigate or reduce flood risk through developments that are able to slow water flow and promote groundwater recharge
6	Land	SO8	<p>Make efficient use of land and avoid sensitive locations</p> <ul style="list-style-type: none"> – Make best use of previously developed land – Avoid locations with sensitive geomorphology – Recognise the economic and other benefits of the best and most versatile agricultural land – Prevent inappropriate development in the Green Belt
7	Landscape and the historic environment	SO3	<p>Protect and enhance Kent's countryside and historic environment</p> <ul style="list-style-type: none"> – Protect the integrity of the AONBs and other particularly valued or sensitive landscapes – Take account of the constraints, opportunities and priorities demonstrated through landscape characterisation assessments and other studies at the landscape scale.

			<ul style="list-style-type: none"> – Protect important heritage assets and their settings, as well as take account of the value of the character of the wider historic environment
8	Transport	SO6	<p>Reduce and minimise unsustainable transport patterns and facilitate the transport of minerals and waste by the most sustainable modes possible</p> <ul style="list-style-type: none"> – Minimise minerals and waste transport movements and journey lengths; and encourage transport by rail and water. – Ensure that minerals and waste transport does not impact on sensitive locations, including locations already experiencing congestion and locations where planned growth or regeneration is reliant on good transport networks.
9	Water	SO4	<p>Maintain and improve the water quality of the Kent’s rivers, ground waters and coasts, and achieve sustainable water resources management</p> <ul style="list-style-type: none"> – Ensure that minerals and waste development seeks to promote the conservation of water resources wherever possible particular reference to abstraction. – Avoid pollution of ground or surface waters, particularly in areas identified as being at risk or sensitive
Scoped out of URS (2013)		SO10 [waste]	

Table 1 SA Framework

1.7. Likely Significant Effects of the Pre-Submission Early Partial Review

The SA has appraised each of the policy amendments which are proposed by the Early Partial Review. The methodology and assumptions used in undertaking the appraisal are set out in Section 5.

The detailed findings of the SA of policy changes are set out in Appendix B and summarised below.

Policy	Sustainability Objective								
	1 Biodiversity	2 Climate change	3 Community and wellbeing	4 Sustainable economic growth	5 Flood risk	6 Land	7 Landscape and the historic environment	8 Transport	9 Water
CSWS 4	+	0	+	+	0	0	0	?	0
CSW 5	+	0	?	0	0	0	+	0	0
CSW 6	0	0	0	0	0	0	0	0	0
CSW 7	+	0	+	+	0	0	0	?	0
CSW 8	+	+	+	+	+	0	0	0	0
CSW 12	0	0	0	0	0	0	0	0	0
CSW 14	0	0	0	0	0	0	0	0	0
DM 7	0	0	++	++/-	0	0	0	0	0
DM 8	0	0	+	++/-	0	0	0	+	0
Overall impacts	+	+	++	++/-	+	0	+	+	0

Table 2: Summary of Findings of SA of Partial Review Overall

Increased reuse, recycling and recovery will have climate change benefits and support the move towards a circular economy.

Ensuring restoration of the landfill in the event that insufficient flue-ash is available to complete the landform will help to improve the landscape impacts of the site and remove any amenity impacts on communities from an unrestored site. Restoration plans include biodiversity benefits and these would be secured earlier than with original plans.

Promotion of energy recovery and heat will reduce emissions of greenhouse gases, helping to attenuate the effects of climate change, particularly the pressures resulting on biodiversity and communities including from flood risk. Energy recovery will also recover economic benefits from waste and provide heat for homes and communities.

Improved safeguarding of mineral resources will help to ensure the availability of aggregates to support housing construction to sustain communities and support economic/industrial activity, although encouraging use of a non-renewable resource is not sustainable. Improved safeguarding of infrastructure for minerals and waste management and transport will also help to support communities and economic/industrial activity and help to ensure the economic transport of materials and availability of sustainable modes of transport.

1.8. Recommendations for Mitigating Adverse Effects

The SA has considered whether there is scope for making recommendations for measures to prevent, reduced and as fully as possible offset any significant adverse effects of the Early Partial Review. In practice, no significant adverse effects have been identified and therefore no mitigation recommendations are made.

1.9. Reasons for Selecting Alternatives Dealt With

The SA is required to appraise reasonable alternatives to the Early Partial Review as proposed. The reasonable alternatives that have been identified largely derive from a 'do nothing' option, in other words, not to make the changes proposed by the Early Partial Review. The following have been identified as reasonable alternatives to the Early Partial Review, here referred to as 'options'.

Option A

- To allocate land for waste facilities as envisaged in the adopted KMWLP;

Option B

- Option B1: To retain the targets for recycling, recovery and landfill in policy CSW 4 of the adopted KMWLP;
- Option B2: To retain targets for recycling and reduce targets for landfill in policy CSW 4 of the adopted KMWLP;

Option C

- Not to strengthen safeguarding in policies DM 7 and DM 8.

Option A would be to produce a Waste Sites Plan as originally envisaged in the KMWLP. It would be possible for Kent County Council to identify and allocate sites as suitable for waste-related development even though no capacity gap has been identified and therefore this has been appraised as a reasonable alternative.

Options B1 and B2 are alternative waste hierarchy targets to those proposed by the Early Partial Review. The Early Partial Review proposes a reduced target for landfill and recycling and an increased target for other recovery. It would be reasonable to retain the targets set by the adopted KMWLP, as these were considered reasonable when it was adopted in 2016. However, a reduced recycling target in the Early Partial Review could be considered a reduction in ambition for sustainable waste management, while retaining a higher landfill target in the adopted KMWLP could similarly be seen as insufficient ambition for sustainable waste management. A third option would therefore be to avoid both of these situations, retaining the recycling ambition of the KMWLP and reducing the landfill target to promote more sustainable waste management.

Option C constitutes the 'do nothing' option in regard to safeguarding.

The 'do nothing' option in respect of the restoration of the landfill at Norwood Quarry is not considered a reasonable alternative to that proposed in the Partial Review. To leave the landfill unrestored would not be an acceptable approach to waste management activity.

1.10. Methodology

The SA has appraised each of the changes to policy proposed by the Early Partial Review, as well as the alternatives described in the previous section. The appraisal was done by assessing each policy amendment and each alternative against the appraisal objectives in turn and making a largely qualitative assessment, with reference also to the baseline data from the Scoping Report.

In reporting the results of the appraisal, the following symbols have been used to indicate the broad nature of the predicted effect:

	Symbol
Significant positive effect	++
Some positive effect	+
No effect	0
Some adverse effect	-
Significant adverse effect	--
Uncertain effect	?

Further details on the methodology, including assumptions made, are given in Section 5 of the main report. Information on the difficulties encountered is provided in Section 4 of the main report. These relate to the lack of available data in some instances, lack of quantification and uncertainties about the scale and nature of some impacts.

1.11. Monitoring Recommendations

The sustainability appraisal has developed a set of recommendations for monitoring the predicted and unforeseen impacts of implementation of the Early Partial Review as proposed. These are set out as a series of indicators related to the sustainability appraisal framework based on the likely and possible impacts of the Early Partial Review. The recommended indicators should be incorporated into the Annual Monitoring Report for the KMWLP and are set out in Section 7.

2. Introduction

2.1. Background

Amey is commissioned to undertake Sustainability Appraisal (SA) in support of the Early Partial Review of the Kent Minerals and Waste Local Plan 2013-30 (KMWLP). This report presents the interim outcomes of this process up to Regulation 19 stage (Pre-submission consultation). SA is a mechanism for considering and communicating the likely effects of a draft plan, and alternatives, with a view to avoiding and mitigating adverse effects and maximising positives.

2.2. The SA Process

It is a legal requirement that SA is undertaken in-line with the procedures prescribed by the Environmental Assessment of Plans and Programmes Regulations 2004, which were prepared in order to transpose into national law the EU Strategic Environmental Assessment (SEA) Directive.

The Regulations require that a report - which for the purposes of SA is known as the 'SA Report' - is published for consultation alongside the Pre-Submission Consultation document of the Early Partial Review and then taken into account, alongside consultation responses, when finalising the Early Partial Review. Essentially, the SA Report must 'identify, describe and evaluate' the likely significant effects of implementing the Early Partial Review, and 'reasonable alternatives' to the Early Partial Review as proposed.

In-line with regulatory requirements, Sustainability Appraisal has already been undertaken throughout the drafting and adoption of the KMWLP (most recently: URS, 2013 and Addenda). Kent are currently developing the Early Partial Review which will amend certain policies in the KMWLP: This SA Report has informed the development of the policy amendments proposed in the Pre-Submission Early Partial Review to go forward to Regulation 19 consultation by undertaking an assessment of the likely effects of the proposed changes.

A scoping exercise has been undertaken, leading to the production in November 2017 of a Scoping Report which explains the rationale behind the SA Framework selected for this Early Partial Review SA. This SA Report has been produced in order to address the statutory appraisal questions as detailed in Table 3, to ensure that the policy amendments have been assessed, any matters of significance noted and mitigation proposed if appropriate.

APPRAISAL QUESTION	CORRESPONDING REQUIREMENT OF THE SEA DIRECTIVE (The report must include...)
1) What is the plan seeking to achieve?	"an outline of the contents, main objectives of the plan or programme and relationship with other relevant plans and programmes" (Annex I(a))
2) What's the sustainability context?	"an outline of the contents, main objectives of the plan or programme and relationship with other relevant plans and programmes" (Annex I(a)) "the environmental protection objectives, established at international, Community or Member State level, which are relevant to the plan or programme and the way those objectives and any environmental considerations have been taken into account during its preparation" (Annex I(e))
3) What's the situation <u>now</u> ?	"the relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan or programme" (Annex I(b)) "the environmental characteristics of areas likely to be significantly affected" (Annex I(c))
4) What would the situation be <u>without</u> the plan?	"the relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan or programme" (Annex I(b))
5) What are the key issues that should be a particular focus of the appraisal?	"any existing environmental problems which are relevant to the plan or programme including, in particular, those relating to any areas of a particular environmental importance, such as areas designated pursuant to Directives 79/409/EEC [Special Protection Areas under the Birds Directive] and 92/43/EEC" (Annex I(d)) (Note impacts on European sites will be specifically addressed through Habitats Regulations Assessment)
6) How has the plan developed up to this point (including the influence of SA)?	"an outline of the reasons for selecting the alternatives dealt with, and a description of how the assessment was undertaken including any difficulties (such as technical deficiencies or lack of know-how) encountered in compiling the required information" (Annex I(h)) "the environmental protection objectives, established at international, Community or Member State level, which are relevant to the plan or programme and the way those objectives and any environmental considerations have been taken into account during its preparation" (Annex I(e))
7) How has the appraisal at this current stage been undertaken?	"an outline of the reasons for selecting the alternatives dealt with, and a description of how the assessment was undertaken including any difficulties (such as technical deficiencies or lack of know-how) encountered in compiling the required information" (Annex I(h))
8) What are the appraisal findings / recommendations at this current stage?	"the likely significant effects (1) on the environment, including on issues such as biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationship between the above factors" (Annex I(f)) "the measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment of implementing the plan or programme" (Annex I(g))
9) How might we monitor the plan's impacts?	"a description of the measures envisaged concerning monitoring..." (Annex I(i))

Table 3 Questions that must be answered (sequentially) within the SA Report

2.3. Compliance with the SEA Directive and Regulations

The Early Partial Review is subject to the requirements of the European Union's Directive on the Environmental Assessment of Certain Plans & Programmes 2001/42/EC (the SEA Directive) and the domestic legislation through which the Directive has been transposed into law in England and Wales (the Environmental Assessment of Plans & Programmes Regulations 2004 – Statutory Instrument 2004 No. 1633).

The SA of the Early Partial Review was designed and undertaken so as to meet the legal requirements for the environmental assessment of plans. Throughout the report the term 'Sustainability Appraisal' should be interpreted as encompassing the SA process as required under the Planning & Compulsory Purchase Act 2004 and the Strategic Environmental Assessment process as required under the European Directive and domestic Regulations on the environmental assessment of plans and programmes.

The following table indicates the components of the SA Report that make up the Environmental Report, as required by domestic and European law on the environmental assessment of plans.

Requirements for Environmental Report	Component of SA Report
a) An outline of the contents, main objectives of the plan or programme, and relationship with other relevant plans and programmes;	Section 3.1
b) The relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan or programme;	Section 3.3
c) The environmental characteristics of areas likely to be significantly affected;	Section 3.5
d) Any existing environmental problems which are relevant to the plan or programme including, in particular, those relating to any areas of particular environmental importance, such as areas designated pursuant to Directives 79/409/EEC and 92/43/EEC;	Sections 3.3 and 3.6
e) The environmental protection objectives, established at international, Community or national level, which are relevant to the plan or programme and the way those objectives and any environmental considerations have been taken into account during its preparation;	Section 3.2
f) The likely significant effects on the environment, including on issues such as biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationship between the above factors;	Section 6 and Appendix B
g) The measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment of implementing the plan or programme;	Section 6.1

Requirements for Environmental Report	Component of SA Report
h) An outline of the reasons for selecting the alternatives dealt with, and a description of how the assessment was undertaken including any difficulties (such as technical deficiencies or lack of know-how) encountered in compiling the required information;	Sections 4.2 and 5.2.3
i) a description of measures envisaged concerning monitoring in accordance with Art. 10;	Section 7
j) a non-technical summary of the information provided under the above headings	Section 1

Table 4 Requirements of SEA Directive and Compliance of SA Report

3. The Scope of the Sustainability Appraisal

3.1. What is the plan seeking to achieve?

The Kent Minerals and Waste Local Plan (KMWLP) was adopted in July 2016 and sets out the vision and objectives for Kent's minerals supply and waste management capacity from 2013 to 2030. The KMWLP is a high level document planning to 2030 which:

- sets out the vision and strategy for mineral provision and waste management in Kent;
- contains a number of development management policies for evaluating minerals and waste planning applications;
- considers strategic site provision for all minerals and waste management facilities; and identifies two areas where key (strategic) mineral and waste development should take place.

The KMWLP has been fully assessed previously by an earlier SA Report².

The adopted Plan identifies a shortfall in capacity of the following types over the Plan period (to 2030):

- Waste recovery capacity - energy from waste and organic waste treatment;
- Hazardous waste (due to the identified need for additional capacity to allow for the continued landfilling of asbestos)
- Disposal of Dredgings.

As a consequence, policies CSW 7, CSW 8, CSW 12 and CSW 14 state that a Waste Sites Plan will be prepared that will identify sites suitable for accommodating facilities needed to address the identified capacity shortfalls.

A review³ of the future needs for waste management facilities in Kent has been undertaken and this has concluded that there is now no need for the development of this additional capacity. This is for the following reasons:

- Energy recovery capacity: the additional capacity at Kemsley Sustainable Energy Plant (SEP) is now confirmed.
- Hazardous waste: Due to the lack of need for additional capacity to allow for the continued landfilling of projected arisings of asbestos from Kent within Kent.

² Sustainability Appraisal of the Kent Minerals and Waste Local Plan, Amey, July 2014; and Addenda

³ BPP Consulting Kent Waste Needs Assessment 2018 Specifically: *Non Hazardous Waste Recycling/Composting Capacity Requirement, September 2018; Non Hazardous Waste Recycling/Composting Capacity Requirement, September 2018; and Hazardous Waste Needs Assessment, September 2018.*

- Disposal of Dredgings: No clear need identified by Port of London Authority (PLA) (the responsible navigation authority) for a specific site.

In addition, while there remains an identified need for organic waste treatment capacity, it is considered that adopted policy in the KMWLP is sufficiently permissive and positive enough for applications to be encouraged to come forward without the allocation of specific sites. It should also be noted that when recycling and composting are considered together there is no predicted shortfall in capacity.

The review and modification of the policies mentioned above will ensure the development plan for Kent, insofar as policies relating to provision for waste management are concerned, is relevant and effective, reflecting changes in circumstances.

Policies DM 7 and DM 8 set out criteria to allow development that may affect safeguarded sites to proceed in certain prescribed circumstances. Policies DM 7 and DM 8 will be amended by the Early Partial Review to ensure that the safeguarding is not unduly rigid in its application.

Policy CSW 5 sets out the criteria to be applied to the assessment of any forthcoming application relating to the Strategic Site Allocation at Norwood Quarry. The Early Partial Review proposes to add a clause providing for assurances that the proposed site can be suitably restored in the event that the void space may no longer be used for management of flue dust residues due to a possible change in government policy. Currently national policy allows landfilling of such waste under a special derogation from the Landfill Directive waste acceptance criteria requirements. This has been subject to review in the past and may change in future. In addition, it is proposed to delete the requirement for an assessment of alternative management methods for flue ash given that significant tonnages are already being managed through other treatment routes.

In parallel with the development of the Early Partial Review, Kent County Council is developing a Minerals Sites Plan. The KMWLP did not allocate specific sites suitable for minerals and waste development except for two strategic sites - one for cement production (and related mineral reserves) at Holborough in the Medway Valley and one for hazardous waste disposal at Norwood Quarry on the Isle of Sheppey. The KMWLP identified that the specific sites for minerals developments would be set out in the separate Minerals Sites Plan. The selection of sites will be based on the policies of the KMWLP and sites proposed for development will be required to comply with the policies of the KMWLP. The Minerals Sites Plan has been subject to SA and the results of this are set out in a separate SA Report.

The Kent Municipal Waste Management Strategy sets objectives for the management of municipal waste. In particular, it sets targets for the percentage of household waste arisings that will be recycled or composted and landfilled. The KMWLP seeks to support implementation of this Strategy by providing land use policies to permit and manage waste developments that will enable the objectives and targets of the Strategy to be achieved.

The government has published the National Planning Policy Framework (July 2018), which sets out planning policies for achieving sustainable development. Emphasis has been placed on the importance of ensuring that Local Plan policies contribute to achieving sustainable development. The Early Partial Review has been prepared in compliance with the National Planning Policy Framework (NPPF).

The current piece of work is to undertake SA of the draft Early Partial Review to inform Regulation 19 consultation on the Pre-submission draft of the Early Partial Review. Rather than being a strategy document in itself, the Early Partial Review makes amendments to certain policies and supporting text of the KMWLP. meet.

3.2. What's the sustainability context?

URS answered this question in 2013 primarily by reviewing the National Planning Policy Framework (NPPF) and considering the contextual messages established through other plans, policies, strategies and initiatives. Although NPPF (2012) was subsequently augmented by the publication of various Planning Guidance, the themes of importance largely remain the same. Where a new aspect of context has been identified, this is identified in the following paragraphs and has been incorporated into the updated Baseline, below. This information was set out in detail in the SA Scoping Report⁴ published in November 2017.

DCLG (2014) Minerals Planning Guidance [<https://www.gov.uk/guidance/minerals>]

Minerals operators should look to agree a programme of work with the mineral planning authority which takes into account, as far as is practicable, the potential impacts on the local community and local environment (including wildlife), the proximity to occupied properties, and legitimate operational considerations over the expected duration of operations.

Water abstraction is additional to issues presented in NPPF.

Lots of useful operational detail on noise, dust plus flow chart wrt 1km search area and PM2.5 AQO – limit value for PM2.5 came into force 2015.

DCLG (2014) National Planning Policy for Waste⁵ []

Positive planning plays a pivotal role in delivering this country's waste ambitions through:

- delivery of sustainable development and resource efficiency, including provision of modern infrastructure, local employment opportunities and wider climate change benefits, by driving waste management up the waste hierarchy;
- ensuring that waste management is considered alongside other spatial planning concerns, such as housing and transport, recognising the positive contribution that waste management can make to

⁴ Scoping Report: Sustainability Appraisal of the Kent Minerals Sites Plan-Making Process, Amey, November 2017

⁵ https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/364759/141015_National_Planning_Policy_for_Waste.pdf

the development of sustainable communities;

- providing a framework in which communities and businesses are engaged with and take more responsibility for their own waste, including by enabling waste to be disposed of or, in the case of mixed municipal waste from households, recovered, in line with the proximity principle;
- helping to secure the re-use, recovery or disposal of waste without endangering human health and without harming the environment; and
- ensuring the design and layout of new residential and commercial development and other infrastructure (such as safe and reliable transport links) complements sustainable waste management, including the provision of appropriate storage and segregation facilities to facilitate high quality collections of waste.

The protection of Green Belt from waste development has been enhanced in this document.

DEFRA (2013) The Waste Management Plan for England⁶

Sets out the Government's ambition to work towards a more sustainable and efficient approach to resource use and management. The key aim of the waste management plan for England is to work towards a zero waste economy as part of the transition to a sustainable economy. In particular, this means using the "waste hierarchy" (waste prevention, re-use, recycling, recovery and finally disposal as a last option) as a guide to sustainable waste management.

Kent Forum (2012) Vision for countywide strategy for the social, economic and environmental wellbeing of Kent's communities

Three Ambitions: Grow the economy Tackle disadvantage Put the citizen in control

Three cross-cutting themes:

- Protecting and enhancing the environment. Everything we do to develop and improve Kent's infrastructure must be sustainable. In growing the economy, we need to support low carbon technologies and help businesses operate more resource-efficiently. Tackling climate change is everyone's responsibility, and we will support and encourage people and communities to play their parts, including through volunteering. We must make the most of Kent's natural environment for people to enjoy, contributing to their wellbeing, and to attract business and tourism. The Kent Environment Strategy sets out the priorities in this area.
- Improving community safety, crime and antisocial behaviour. In order to build a strong economy, improve our lives and take control, the people and communities of Kent need to feel safe, protected from crime, anti-social behaviour, fires and accidents. There is more that we can do to reinforce a sense of community across the county.

⁶ https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/265810/pb14100-waste-management-plan-20131213.pdf

- Improving Health. Seeing improvements in residents' overall health, while, at the same time, tackling the health inequalities' gap is hugely important. Improvements will only be made with the support of employers, the voluntary and communities sector and residents themselves. Business can support positive physical and mental health measures for a healthy workforce. Residents need to accept greater responsibility for their health and by doing so improve life expectancy.

KCC (2015) Kent State of the Environment Report

Key issues:

- Air quality: It has been estimated that poor air quality contributes to approximately five percent of deaths per year and possibly contributes to more mortality and morbidity than passive smoking. There are currently 40 air quality management areas in the county where air pollutants have been known to exceed objectives set by Government.
- Transport: The county of Kent is currently facing increased congestion on both road and rail, impacting Kent's economy, health and environment. A shift to active travel, such as walking and cycling, and an increase in use of public transport can help alleviate congestion pressures, improve air quality and extend the capacity of our transport infrastructure over a longer timeframe.
- Water: In Kent we are already using most of the capacity in the county and in some places already exceeding it. This water stress will be exacerbated by a growing population and climate change. In addition, the quality of our water affects our health, our economy and our natural environment but is under increasing pressure from pollution, reduced river flows and physical modifications to water bodies.
- Severe weather, heat and flooding: Severe weather events impact infrastructure, homes, communities and the delivery of services, to the detriment of Kent partners, residents and businesses. Kent has the highest risk of local flooding of all local authorities in England. Our health is also impacted by severe weather. For example, daily mortality in South East England increases at temperatures above about 27°C and heat-related mortality is projected to increase steeply in the UK in the 21st century.
- Land-use change: Our increasing population, housing development, transport links, industry and agriculture all require space and resources, putting pressure on the county's landscapes and changing how we use the land. This also has an impact on the quality of our soils and their ability to sustain life, reduce carbon emissions and support resilience to climate change and its impacts such as flooding. The decisions we make in how growth is delivered for Kent will be vital to maintain the assets our residents value.
- Biodiversity: In Kent we have not met our Biodiversity 2010 targets and with biodiversity continuing to decline, it is likely that we will also fail to meet our Biodiversity 2020 targets without targeted interventions. A healthy natural environment, rich in biodiversity, provides more effective services; the economic impact that degraded habitats have on ecosystem services, for example through the decline in pollinators, is increasingly recognised.

- Energy consumption and generation: Kent is committed to reducing greenhouse gas emissions by 34% by 2020 and 60% by 2030 from a 2005 baseline. In the context of planned growth of our population and housing development across Kent, additional low carbon and appropriate renewable energy infrastructure, as well as an increase in uptake of energy efficiency initiatives will be needed to ensure we meet our targets and benefit from the opportunities for innovation in these sectors.

KCC (2016) Kent Environment Strategy

Development of the strategy provides a framework to ensure that resources are utilised to greatest impact. Our challenges, learning and opportunities together underpin the priorities we have identified in the themes of the strategy.

- Theme One: Building the Foundations for Delivery. Outcome: Our policies, actions and decisions are based on a clear evidence base and resources are in place for delivery.
- Theme Two: Making best use of existing resources and minimising negative impacts. Outcome: All sectors are aware of their impact on the environment and how to avoid or reduce this through evidence based decision making, reducing resource usage and wasting less.
- Theme Three: Toward a sustainable future. Outcome: Kent is actively addressing the risks, impacts and opportunities from environmental and climate change, whilst delivering wider economic and health opportunities.

KCC (2017) Environment Strategy: a strategy for Environment, Health and Economy Implementation Plan 2017

- Priority 5: Conserve and enhance the quality and supply of the county of Kent's natural and historical resources and assets
- Priority 6: Improve our resource efficiency such as energy, water and land
- Priority 7: Ensure sustainable access and connectivity for businesses and communities
- Priority 8: Influence future sustainable growth for the county of Kent
 - S F 8.1: Ensure that key environmental risks such as flooding, water scarcity and heat are informing policy decisions and development
 - SF8.2: Address the environmental challenges and ambitions identified in the Growth and Infrastructure Framework and local plans, such as sustainable and alternative transport options, green infrastructure, energy , water and flooding
- Priority 9: Improve the county of Kent's environmental, social and economic resilience to environmental change
 - SF9.2: Ensure that public sector services have assessed key environment and severe weather risks and opportunities and are taking action accordingly
- Priority 10: Supporting growth in the rural economy and low carbon and environmental services sector

- SF 10.2: Maximise opportunities for the rural sector.

Since the publication of the SA Scoping Report in November 2017, the National Planning Policy Framework (NPPF) has been revised and was published in July 2018⁷. This is the overarching document guiding planning policy in England and as such is important to review to ensure that the SA appraisal framework is consistent with the policy objectives of the NPPF. In 2018, the Government also published a new 25 Year Environment Plan, "A Green Future"⁸. A review has been undertaken and the main policy objectives of the NPPF and "A Green Future" relevant to the Early Partial Review are set out in Appendix A.

The key conclusions drawn from this review are that the appraisal framework used to assess the Early Partial Review should be amended to ensure that the following policy objectives are adequately covered in the framework:

- Recognise the economic and other benefits of the best and most versatile agricultural land;
- Prevent inappropriate development in the Green Belt;
- Protect and enhance public rights of way and access;
- Protect local green space.

3.3. What's the situation now and how would it change without the plan (sustainability 'baseline')?

The following is a summary of the sustainability baseline characteristics described by URS (2013), to set the scene on this further piece of work. Additional items identified during context review are also presented.

Environmental baseline

- Kent is considered to be one the UK's most wildlife-rich counties. This is a result of its varied geology, long coastline, landscape history and southerly location / proximity to mainland Europe.
- Natura 2000 habitat is concentrated around the coast, particularly around the Thames Gateway (much within Medway UA), the Isle of Thanet, the Stour Estuary and Dungeness. Sites of Special Scientific Interest (SSSI) cover 8.5% of the county. The county contains c.10% of England's ancient woodland.
- The Thames Gateway is also acknowledged for its national importance due to 'brownfield' biodiversity.
- The last century has seen major losses and declines of species within Kent. Amongst the most important drivers of biodiversity loss in Kent are: the direct loss of land of value to wildlife to built-development or intensive farming, which has reduced and fragmented populations; and the effects of climate change.
- Analysis at the County level has informed the location of 16 Biodiversity Opportunity Areas (BOAs) across Kent covering 40% of the land area (BOAs cover 35% of the South East).
- Since 2008 there has been a reduction in carbon dioxide emissions of 0.8 tonnes per capita. Nonetheless, this figure remains higher than regional and national emission levels.

⁷ National Planning Policy Framework, Ministry of Housing Communities and Local Government, July 2018

⁸ A Green Future: A 25 Year Plan to Improve the Environment, HM Government, 2018

- In 2010 it is estimated that 1050 early deaths occurred as a result of just PM2.5 air pollution across Kent & Medway [KMAQM, 2015]
- Kent is considered to be the most at risk local flood authority in England. Flooding has a significant impact on residents and the economy, with such effects predicted to worsen due to climate change.
- In Kent there are many catchments where there is little or no water available for abstraction during dry periods. Pressures are particularly notable in Kent as it is one of the driest parts of England and Wales, coupled with high population density and household water use. Over the next few decades, there will be increasing pressures from the rising population and associated development. Looking further ahead, climate change could have a major impact on the water that will be available for consumption. [EA, 2012]

Social baseline

- Kent had an estimated population of 1,466,500 in mid-2011. By 2021 the population of Kent is projected to increase by 9.4% from 2012. The age group with the greatest projected percentage change in population is 65+ (21.2%).
- In mid-2011, Kent had the largest rural population of any county in the South East (29%) and identified problems of 'rural deprivation', e.g. associated with access to services, facilities and housing affordability.
- In terms of the 'Index of Multiple Deprivation', Kent ranks within England's least deprived third of authorities. However, significant areas within Kent are amongst England's most deprived 20%. Life expectancy is 8.2 years lower for men and 4.5 years lower for women in the most deprived areas of Kent than in the least deprived areas.
- Early death rates from cancer, heart disease and stroke have fallen and are better than the England average. About 18.4% of Year 6 children are classified as being obese, lower than the average for England. However, estimated levels of adult obesity are worse than the England average.
- Climate change projections highlight an increase in risk to people from flooding; and hotter and sunnier summers leading to public health risks.

Economic baseline

- In 2011, the Gross Domestic Household Income (GDHI) in Kent was £16,855, 5.1% above the UK average, while the South East region was 12.8% above the UK average.
- 2011 was the first year since 2008 that the 'birth' of enterprises in the Kent exceeded the number of 'deaths'.
- During the period October 2011 to September 2012, the employment rate for residents of Kent was 71.1%, a lower figure than that for the South East (74.6%) and close to that for England (70.7%).
- In Kent, the unemployment rate for October 2011 to September 2012 was 7.4% of the population aged 16 years and over; greater than the rate for the South East (5.8%) and close to the rate for England (7.9%).
- The 'public administration, education and health' sector employs the highest proportion of persons aged 16 to 64 (30.7%). Agriculture and fishing employs the lowest proportion of the population aged 16 to 64 (1.6%). These are also the lowest / highest employers at regional and national levels.

How would the baseline would change without the Early Partial Review?

There is a degree of uncertainty about how the baseline might change without the adoption of the Early Partial Review. Developments will still be required to comply with the development management policies of

the KMWLP. This includes policies on the protection and enhancement of: biodiversity value, landscape, Green Belt, heritage assets, the water environment, health and amenity (including air quality) and transportation. Long term trends in environmental quality are likely to continue.

However, without the Early Partial Review there is the potential for oversupply in waste capacity as policies in the KMWLP identify a capacity need. This may result in waste being transported from outside the county to provide inputs to waste facilities which will have which will have adverse effects on transport networks, air quality and greenhouse gas emissions.

Without the Early Partial Review it is possible that some mineral resources will be lost to other developments through weaker safeguarding policy. Kent may be less able to provide enough minerals to support the expected future demand for minerals from construction and industry. In such an event, there would be a need to source minerals from elsewhere. This may mean importing minerals from other parts of the country, which will have adverse effects on transport networks, air quality and cost. Alternatively, increased quantities may need to be secured from secondary and recycled aggregates and/or marine dredged aggregates. If sufficient minerals of the right type cannot be found, construction and industrial growth may be checked. This could lead to insufficient homes being provided with adverse effects on people and communities. Minerals in Kent would not provide sufficient material to support economic growth and industrial activity, in which case employment levels could reduce and GDP and household incomes may fall.

Loss of transport and other infrastructure for minerals and waste without the Early Partial Review is likely to result in materials being transported further with consequent impacts on air quality and transport networks and could result in the loss of sustainable transport modes. This would increase transport and material costs which would adversely affect the profitability of industry.

Without the adoption of the Early Partial Review, emissions of carbon dioxide will be greater than with its adoption. The aim is to reduce the targets for the percentage of waste going to landfill and to manage it at higher levels of the waste hierarchy and to promote the recovery of energy from waste. Without this, it could increase climate change effects including flooding with risks for communities, wildlife and habitats. Other climate change pressures may be increased with effects on biodiversity and communities, including increased temperatures and more frequent extreme weather events.

Landscape in the locality of the strategic site for waste could be negatively affected if the Early Partial Review is not adopted. If insufficient flue ash is available to restore the landfill, the landfill may not be restored in line with original plans which could have lasting landscape impacts and may affect the amenity of nearby residents.

The social baseline is unlikely to be affected without the adoption of the Early Partial Review. Population, levels of deprivation and health are unlikely to be significantly different with or without the Early Partial Review.

3.4. What are the key sustainability issues?

Following review of both context and baseline, the SA Scoping Report set out the key sustainability issues in Kent as follows. Findings of significance from the SA of Kent's MWLP are also presented (see boxes) (both URS, 2013):

Biodiversity

- Ambitious BAP targets have been set, including for habitat creation and for reducing fragmentation and improving connectivity. Landscape scale projects are underway with biodiversity conservation and access to biodiversity as central components.
- It is possible to increase the connectivity between important habitat patches by incorporating habitat creation as part of new development. There is a particular need to maximise the biodiversity benefits associated with restoration of minerals sites.
- Biodiversity benefits relate to the minerals development management strategy, which is set to ensure that negative effects associated with minerals extraction are avoided or mitigated, and the potential for minerals development to contribute to biodiversity objectives is realised.

Climate change

- There is the potential to promote energy from waste as well as other technologies that increase the carbon efficiency of minerals and waste operations.
- Transport is a significant contributor to greenhouse gas emissions that should be addressed through the plan.

Community and well-being

- Clear spatial variation across Kent exists in terms of income, employment and health deprivation.
- Rural deprivation is also a recognised problem, for example for the Isle of Sheppey and the Romney Marsh area.
- Deprivation is focused amongst particular socio-economic groups, for example Gypsies and travellers.
- Community impacts associated with the proximity of quarries and also lorry movements is an issue of strategic importance.
- Traffic on the motorway and A-road network is the cause of the majority of designated Air Quality Management Areas (AQMAs)
- Future development at existing population centres is likely to put further pressure on the road network, and lead to new and worsened occurrences of poor air quality.
- There remain instances where point source air pollution is a strategic issue.

Sustainable economic growth

- There are ambitious plans for economic growth and regeneration, for example in East Kent and the Kent Thames Gateway.
- There are local disparities in economic activity (including problems of 'rurality')
- Economic benefits relate to the targeted measures that are proposed as part of the minerals strategy; in particular, around ensuring supply of materials for strategically important industries / economic activities.

Flood risk

- There is extensive flood risk in Kent, and this situation is set to become worse with climate change.

Land

- There is a need to make best use of previously developed land and avoid the loss of the County's best and most versatile agricultural land. There is also a need to avoid conflict with coastal geomorphology
- 'Land' and 'landscape' benefits relate to the support that is provided for Construction and Demolition (CD) recycling (i.e. aggregate recycling), which reduces the need to extract primary aggregates. There is also a focus on ensuring that the non-recyclable fraction of this inert waste is targeted at quarry restoration projects as a priority. In addition, the MWLP is supportive of efforts to increase the movement of minerals via wharves which should have the effect of encouraging supply of marine dredged aggregates and hence reducing the need for land won aggregates.

Landscape and the historic environment

- There is a need to protect the integrity of the most valued and sensitive landscapes as well as to avoid damage to the landscape character more widely (signs of change inconsistent with countryside character have been identified in several areas).
- Along with a loss of the distinctiveness of the landscape character there has been a noticeable decrease in the tranquillity of landscapes and landscapes that are genuinely 'wild and remote'.
- Specific landscape impacts can be associated with minerals and waste development. Appropriate restoration should be sought to mitigate effects.
- There is a need to take account of designated heritage assets and their settings as well as undesignated assets and wider historic character
- Heritage / historic environment benefits (which are relatively small magnitude and hence of unclear significance) relate to the support that is provided to extraction of minerals for heritage building products with a view to maintaining a diverse supply.
- There remains ongoing debate about the potential for impacts to the AONB, e.g. from silica sand extraction, but the stringency of policy has been strengthened and so effects are now unlikely. There is also some uncertainty around the landscape / biodiversity implications of making provision for both soft sand and sharp sand / gravel landbanks.

Transport

- Much of the primary road network operates at, or above, capacity and there is a shortage of freight paths on the rail network.
- There is a need to adhere to the proximity principle wherever possible.
- There is a need to increase the amount of waste and, in particular, minerals transported by rail or inland waterway.
- Plans are in place to improve the transport infrastructure within and to the Thames Gateway, East Kent and Ashford. The Kent MWDF should recognise and support the aims of regional hubs.
- 'Transport' (and hence also climate change mitigation) benefits relate to the fact that the waste strategy is geared towards ensuring strict adherence to the 'proximity principle', i.e. a situation whereby waste is managed close to the source of production. It is also the case that the minerals strategy includes a focus on the safeguarding of wharves and railheads across the County to enable the on-going importation of marine dredged aggregates, crushed rock and other minerals by sea and rail, rather than by road. No significant negative effects / trade-offs are identified and no recommendations remain outstanding at this current stage.

Water

- Water scarcity is set to become a greater problem in coming as a result of population growth, climate change and the need to comply with the requirements of the Water Framework Directive.
- Groundwater pollution from a range of sources is evident across much of Kent.

3.5. Characteristics of areas likely to be significantly affected

The SEA Directive requires that the appraisal describes the characteristics of areas likely to be significantly affected by the Early Partial Review. In deciding which areas are likely to be significantly affected, the SA has considered whether there is a spatial element to the proposed policy changes and therefore whether some parts of the county will be particularly affected. There is only one policy with a spatial element and that is the policy relating to Norwood Quarry, the strategic site for waste. The appraisal of the change to this policy has not identified any significant effects arising from change to the policy. It is therefore concluded that there are no areas likely to be significantly affected.

3.6. Areas of Particular Environmental Importance

A Habitats Regulations Assessment has been undertaken for the Early Partial Review⁹. This identified that impacts from one strategic site, Norwood Quarry Extension, requires consideration because of the potential for impact on two designated sites:

- Medway Estuary and Marshes SPA and Ramsar;
- Swale SPA and Ramsar

Medway Estuary and Marshes SPA and Ramsar

The Medway Estuary feeds into and lies on the south side of the outer Thames Estuary in Kent, south-east England. It forms a single tidal system with the Swale and joins the Thames Estuary between the Isle of Grain and Sheerness. It has a complex arrangement of tidal channels, which drain around large islands of saltmarsh and peninsulas of grazing marsh. The mud-flats are rich in invertebrates and also support beds of *Enteromorpha* and some Eelgrass *Zostera* spp. Small shell beaches occur, particularly in the outer part of the estuary. Grazing marshes are present inside the sea walls around the estuary. The complex and diverse mixes of coastal habitats support important numbers of waterbirds throughout the year. In summer, the estuary supports breeding waders and terns, whilst in winter it holds important numbers of geese, ducks, grebes and waders. The site is also of importance during spring and autumn migration periods, especially for waders.

⁹ Early Partial Review of the Kent Minerals and Waste Local Plan 2013-30 & Kent Mineral Sites Plan: Appropriate Assessment, Ecus Ltd, November 2018

Swale SPA and Ramsar.

The Swale is located on the south side of the outer part of the Thames Estuary in south-eastern England. The Swale is an estuarine area that separates the Isle of Sheppey from the Kent mainland. To the west it adjoins the Medway Estuary. It is a complex of brackish and freshwater, floodplain grazing marsh with ditches, and intertidal saltmarshes and mud-flats. The intertidal flats are extensive, especially in the east of the site, and support a dense invertebrate fauna. These invertebrates, together with beds of algae and Eelgrass *Zostera* spp., are important food sources for waterbirds. Locally there are large Mussel *Mytilus edulis* beds formed on harder areas of substrate. The SPA contains the largest extent of grazing marsh in Kent (although much reduced from its former extent). There is much diversity both in the salinity of the dykes (which range from fresh to strongly brackish) and in the topography of the fields. The wide diversity of coastal habitats found on the Swale combine to support important numbers of waterbirds throughout the year. In summer, the site is of importance for Marsh Harrier *Circus aeruginosus*, breeding waders and Mediterranean Gull *Larus melanocephalus*. In spring and autumn migration periods, as well as during winter, the Swale supports very large numbers of geese, ducks and waders. Ashdown Forest SAC and SPA

Habitats Regulations Assessment

Kent County Council have commissioned Ecus Ltd to undertake a Habitats Regulations Assessment (HRA) of the Early Partial Review. The HRA investigates the potential impact of the policy changes proposed by the Early Partial Review on Natura 2000 sites in the context of the Conservation of Habitats and Species Regulations 2010 (as amended) ('the Habitats Regulations'), which transpose the European Habitats Directive 1992 and Wild Birds Directive 2009 ('the Directives') into English law and hereafter referred to as the 'Habitats Regulations'.

An HRA Screening report concluded that:

'Potential air quality impacts as a result of Norwood Quarry, which is located within 200m of [Medway Estuary and Marshes SPA and Ramsar; and The Swale SPA and Ramsar] sensitive European sites. It will need to be determined whether this site is likely to result in an increase of more than 200 Heavy Duty Vehicles /day on any road that lies within 200m of a European site.'

'If any further information regarding the issues and the site can be obtained, this assessment can be refined to inform the final selection of sites for submission to the Secretary of State. If such information is not currently available then the recommendations for further study identified in the preceding sections should be used as specific guidance to the site promoters involved in each site.'

The Appropriate Assessment found that the proposed changes as a result of the Early Partial Review of the KMWLP are relatively minor. As this does not result in any significant changes to the strategic site or to the KMWLP and no new information is available on the site and likely vehicle movements to inform further assessment, the conclusions of the original HRA screening report (as above) remain valid.

4. How has the plan developed up to this point?

4.1. Background to the Development of the SA

The process of making the KMWLP commenced in 2009, with SA starting simultaneously and leading to the publication of the MWLP SA Scoping Report (Scott Wilson, 2010). The MWLP SA Scoping Report (Scott Wilson, 2010) included Sustainability Objectives (SO) which had been established during the Scoping process to provide the Framework for the subsequent Sustainability Appraisal. These are presented in Table 6.

Sustainability Objective (SO)	
SO1	Reduce the risk of flooding and the resulting detriment to public wellbeing, the economy and the environment
SO2	Ensure that development will not impact on important elements of the biodiversity resource and where possible contributes to the achievement of the Kent Biodiversity Action Plan and other strategies
SO3	Protect and enhance Kent's countryside and historic environment
SO4	Maintain and improve the water quality of the Kent's rivers, ground waters and coasts, and achieve sustainable water resources management
SO5	Address the causes of climate change through reducing emissions of greenhouse gases through energy efficiency and energy generated from renewable sources
SO6	Reduce and minimise unsustainable transport patterns and facilitate the transport of minerals and waste by the most sustainable modes possible
SO7	Plan for the correct waste management facilities, in the right place at the right time
SO8	Make efficient use of land and avoid sensitive locations
SO9	Support efforts to create and sustain sustainable communities, particularly the improvement of health and well-being
SO10	Support the delivery of housing targets
SO11	Support economic growth and diversification

Table 5 Sustainability Objectives established during SA Scoping (Scott Wilson, 2010)

In 2011, these SOs were used to appraise the options which were at the time presented for Minerals and Waste Sites. This was undertaken on a site-by-site basis (Atkins, 2011). In 2012 a similar process was used to assess the Preferred Options (URS, 2012). By 2014 these SOs had been further developed, and the Consultation Draft of the SA Report (URS, 2013) presented the following Assessment Framework (Tables 7 & 8):

1	Biodiversity
2	Climate change
3	Community and well-being
4	Sustainable economic growth
5	Flood risk
6	Land
7	Landscape and the historic environment
8	Transport
9	Water

Table 6 Sustainability Assessment Framework used in SA Report (Consultation Draft) (URS, 2013)

The KMWLP was adopted in 2016 having been through full Sustainability Appraisal culminating in the SA Report and Addenda (URS, 2013; URS, 2015; AECOM, 2015a and 2015b) and the SA Adoption Statement (AECOM, 2016). Kent County Council (KCC) are now proceeding with the Early Partial Review preparation process.

In Summer 2017 a Scoping exercise was undertaken by Amey, leading to the publication in November 2017 of a Scoping Report¹⁰ which developed the context and baseline for this Early Partial Review SA, and developed the SA Framework and Objectives to be used in the appraisal (presented in Section 4.1).

4.2. The Development of the Early Partial Review

Alongside publication of the SA Scoping Report, Kent County Council published proposals for the scope and content of the Early Partial Review as part of a Regulation 18 consultation process. The rationale for the Early Partial Review was as follows.

The adopted KMWLP identified a shortfall in waste management capacity over the Plan period for the following types of waste management: waste recovery (energy from waste and organic waste treatment), hazardous waste, and the disposal of dredgings. To improve certainty concerning the provision of the required capacity, policies CSW 7, CSW 8, CSW 12 and CSW 14 commit the County Council to allocating sites suitable for accommodating waste facilities in a Waste Sites Plan. Policy CSW 4 sets the strategy context for waste management capacity.

A 'Call for Sites' exercise from December 2016 to January 2017 resulted in several sites being promoted but none for the disposal of dredgings or asbestos.

In terms of additional organic waste treatment capacity, the review of waste requirements concluded that, when considered separately from recycling there is a continued need for some additional capacity but when recycling and composting are considered together no additional capacity is required. In any event, it is considered that the Plan's policy is sufficiently supportive of organic waste treatment, such that the identification of specific sites to provide any additional certainty that development will come forward is not justified.

The review of waste requirements therefore indicates that there is insufficient justification for a Waste Sites Plan and therefore changes to a number of the adopted KMWLP waste policies and explanatory text are required to remove the commitment to identify sites within a separate Waste Sites Plan. This will ensure that there is no over-supply of capacity.

10 Scoping Report: Sustainability Appraisal of the Kent Minerals Sites Plan-Making Process, Amey, November 2017

The original calculation of recycling and composting capacity requirements presented in Policy CSW 7 was based on targets formulated in January 2012 using 2010/11 data. The Local Authority Collected Waste (LACW) targets were based on the aspiration of KCC in its role as Waste Disposal Authority (WDA) for Kent and the Commercial and Industrial Waste targets were based on those in the South East Plan (adopted in 2009).

Since adoption of the KMWLP, the EU Circular Economy Package has been adopted and the UK Government has confirmed its intention to comply with the targets set within it regardless of the UK leaving the European Union. Therefore the targets have been updated to reflect those set as follows:

- recycling target for municipal waste 55% by 2025 and 60% by 2030; and
- 10% limit of landfilling of municipal waste by 2035.

In addition, the progression to achieving LACW recycling targets has been scaled back (compared both to adopted Plan and the draft Early Partial Review document) to reflect the fact that the actual recycling rate achieved in 2015/16 was five percentage points lower than projected in the adopted KMWLP (46% rather than 51%), therefore the revised targets are more achievable (while remaining ambitious).

Kent County Council has been using the adopted minerals and waste safeguarding policies while considering local applications that affect both safeguarded minerals and waste management infrastructure. These policies include policies DM 7 and DM 8. Monitoring of the Plan has revealed a significant ambiguity that means that these policies are not being interpreted as intended and that in some circumstances, minerals and waste safeguarding objectives are being undermined. In practice, there have been occasions where the policies are being interpreted to exclude any site allocations in adopted development plans from the safeguarding process, regardless of whether minerals and waste safeguarding was considered during the site allocation process. The Early Partial Review which is proposed provides the opportunity to address this matter.

In November 2017, proposals for the scope and content of the Early Partial Review were published for a Regulation 18 Consultation reflecting changes outlined above for policies CSW 4, CSW 7, CSW 8, CSW 12, CSW 14, DM 7 and DM 8.

Policy CSW 5 sets out the criteria to be applied to the assessment of any forthcoming application relating to the Strategic Site Allocation at Norwood Quarry. Subsequent to the Regulation 18 consultation, a decision was taken to include an amendment to this policy in the Early Partial Review. The Early Partial Review proposes to add a clause providing for assurances that the proposed site can be suitably restored in the event that the void space may no longer be used for management of flue dust residues due to a possible change in government policy. Currently national policy allows landfilling of such waste under a special derogation from the Landfill Directive waste acceptance criteria requirements. This has been subject to review in the past and may change in future. In addition, it is proposed to delete the requirement for an assessment of alternative management methods for flue ash given that significant

tonnages are already being managed through other treatment routes. This additional policy change has been added to the scope of the Early Partial Review and is issued for consultation as part of the Regulation 19 consultation process.

An outline of the process to date is presented in Figure 1, below. At the time of reporting Step 10 is nearing completion.



Figure 1 Summary of the parallel planning and SA processes

4.3. Difficulties Encountered

A number of difficulties were encountered in undertaking the appraisal:

- **Data.** A common problem affecting SA is the availability and reliability of data. Although data has been collected to illustrate a number of the conditions and trends relevant to the SA of the Early Partial Review, some data sets are more useful than others, and some data sets are known to be old,

incomplete or unreliable. In some cases, no data is available. It is therefore almost impossible to quantify effects with certainty.

- **Uncertainty.** It has not been possible for the SA to quantify the predicted impacts of the policy changes proposed by the Early Partial Review. In all cases a qualitative assessment of impacts has been made. This is particularly the case in relation to the effects on greenhouse gas emissions of encouraging the management of waste at higher levels of the waste hierarchy. While positive impacts are likely, it has not been possible to quantify these. It is also not possible to know with certainty what the implications are likely to be for the effects of climate change, including on communities and wildlife.

5. How has the appraisal at this current stage been undertaken? [Sustainability Appraisal Methodology]

5.1. SA Framework and Sustainability Objectives

Following due diligence in terms of the context and baseline conditions, the Framework and Sustainability Objectives for the SA of the Early Partial Review has been developed using that produced by URS (2013). The relationship between the 2010 Scoping and 2013 SA Report objectives is presented in Table 7 below, which also expands on the detail of the objectives and the additions made following the 2017 Scoping exercise and review of the NPPF 2018 and 25 Year Environment Plan.

Sustainability Objectives (URS, 2013)	Corresponding SO (Scott Wilson, 2010)	Detail – including additions resulting from MPS SA Scoping (Amey, 2017) and additions resulting from review of NPPF and 25YEP
1 Biodiversity	SO2	<p>Ensure that development will not impact on important elements of the biodiversity resource and where possible contributes to the achievement of the Kent BAP and other strategies</p> <ul style="list-style-type: none"> – Add to the biodiversity baseline by creating opportunities for targeted habitat creation (which, ideally, contributes to local or landscape scale habitat networks). – Avoid hindering plans for biodiversity conservation or enhancement – Support increased access to biodiversity
2 Climate change	SO5	<p>Address the causes of climate change through reducing emissions of greenhouse gases through energy efficiency and energy generated from renewable sources</p> <ul style="list-style-type: none"> – Promote sustainable design and construction of facilities and support wider efforts to reduce the carbon footprint of minerals operations.
3 Community and well-being	SO9, SO7	<p>Support efforts to create and sustain sustainable communities, particularly the improvement of health and well-being; and support the delivery of housing targets</p> <ul style="list-style-type: none"> – Help to redress spatial inequalities highlighted by the Index of Multiple deprivation. – Help to tackle more hidden forms of deprivation and exclusion, such as that which is experienced in rural areas and particular socio-economic groups within communities. – Ensure that the necessary aggregates are available for building, and that the necessary waste infrastructure is in place to support housing growth – Ensure that minerals development does not contribute to poor air quality particular reference to PM2.5. – Protect and enhance public rights of way and access

			– Protect local green space
4	Sustainable economic growth	SO11	Support economic growth and diversification – Support the development of a dynamic, diverse and knowledge-based economy that excels in innovation with higher value, lower impact activities – Stimulate economic revival and targeted employment generation in deprived areas
5	Flood risk	SO1	Reduce the risk of flooding and the resulting detriment to public wellbeing, the economy and the environment – Ensure that development does not lead to increased flood risk on or off site – Seek to mitigate or reduce flood risk through developments that are able to slow water flow and promote groundwater recharge
6	Land	SO8	Make efficient use of land and avoid sensitive locations – Make best use of previously developed land – Avoid locations with sensitive geomorphology – Recognise the economic and other benefits of the best and most versatile agricultural land – Prevent inappropriate development in the Green Belt
7	Landscape and the historic environment	SO3	Protect and enhance Kent's countryside and historic environment – Protect the integrity of the AONBs and other particularly valued or sensitive landscapes – Take account of the constraints, opportunities and priorities demonstrated through landscape characterisation assessments and other studies at the landscape scale. – Protect important heritage assets and their settings, as well as take account of the value of the character of the wider historic environment
8	Transport	SO6	Reduce and minimise unsustainable transport patterns and facilitate the transport of minerals and waste by the most sustainable modes possible – Minimise minerals and waste transport movements and journey lengths; and encourage transport by rail and water. – Ensure that minerals and waste transport does not impact on sensitive locations, including locations already experiencing congestion and locations where planned growth or regeneration is reliant on good transport networks.
9	Water	SO4	Maintain and improve the water quality of the Kent's rivers, ground waters and coasts, and achieve sustainable water resources management

Scoped out of URS (2013)	SO10 [waste]	<ul style="list-style-type: none"> – Ensure that minerals and waste development seeks to promote the conservation of water resources wherever possible particular reference to abstraction. – Avoid pollution of ground or surface waters, particularly in areas identified as being at risk or sensitive
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Table 7 SA Framework

5.2. Applying the Framework

5.2.1 Effects Categories and Assumptions

The SA of sites was undertaken by URS in 2012 for the sites that at the time were deemed to be Preferred Options. Although the outcome of this exercise is no longer relevant due to subsequent changes to the MWLP, the Effects Categories (Figure 2) have been used in the current exercise.

	Symbol
Significant positive effect	++
Some positive effect	+
No effect	0
Some adverse effect	-
Significant adverse effect	--
Uncertain effect	?

Figure 2 Effects categories (URS, 2012)

5.2.2 SA of the Early Partial Review

The SA is required to undertake an appraisal of the Early Partial Review as proposed. Each of the changes to policies in the KMWLP has been subject to assessment using the SA framework developed by URS in their 2013 SA Report as amended (see table 8). An assessment matrix has been drafted and is presented in Appendix B and the results are summarised in Section 6.1.

As discussed in Section 3.3; it has been assumed that the baseline conditions within Kent remain unchanged from those detailed within the URS Sustainability Appraisal and Addenda published to date.

The appraisal of policy changes has considered a range of different types of effects as required by Annex I of the SEA Directive, namely: secondary effects; effects in the short, medium and long term; whether effects are permanent or temporary; and positive and negative effects. The type of effects identified are indicated in the tables in Appendix B.

Effects are identified in the short, medium and long term. To make this assessment, the short term has been chosen as being within the first 5 years of adoption of the Early Partial Review, the medium term is

considered to be the remainder of the Plan period for the KMWLP and the long term is after the end of the Plan period of the KMWLP.

An assessment has also been made of the probability of the identified effect occurring (low, medium or high), whether the effect is direct or indirect, and whether the effect is temporary or permanent indicated by whether or not the effect could be reversed.

Cumulative and synergistic effects are discussed in Section 6.3.

In order to determine the significance of effects, the appraisal has followed the criteria for determining significance as set out in Annex II of the SEA Directive.

The appraisal has assessed the likely effects arising from adoption of the Early Partial Review and considered whether there is scope to make recommendations for measures to prevent, reduce and as fully as possible offset any significant adverse effects of implementing the Early Partial Review. In effect, the appraisal has not identified any significant adverse effects and therefore there is no scope to make recommendations for mitigation.

5.2.3 SA of Alternatives to the Early Partial Review as Proposed

The SA is required to appraise reasonable alternatives to the Early Partial Review as proposed. The reasonable alternatives that have been identified largely derive from a 'do nothing' option, in other words, not to make the changes proposed by the Early Partial Review. The following have been identified as reasonable alternatives, here referred to as 'options'.

Option A

- To allocate land for waste facilities as envisaged in the adopted KMWLP;

Option B

- Option B1: To retain the targets for recycling, recovery and landfill in policy CSW 4 of the adopted KMWLP;
- Option B2: To retain targets for recycling and reduce targets for landfill in policy CSW 4 of the adopted KMWLP;

Option C

- Not to strengthen safeguarding in policies DM 7 and DM 8

Option A would be to produce a Waste Sites Plan as originally envisaged in the KMWLP. It would be possible for Kent County Council to identify and allocate sites as suitable for waste-related development even though no capacity gap has been identified and therefore this has been appraised as a reasonable alternative.

Options B1 and B2 are alternative waste hierarchy targets to those proposed by the Early Partial Review. The Early Partial Review proposes a reduced target for landfill and recycling and an increased target for other recovery. It would be reasonable to retain the targets set by the adopted KMWLP, as these were considered reasonable when it was adopted in 2016. However, a reduced recycling target in the Early Partial Review could be considered a reduction in ambition for sustainable waste management, while retaining a higher landfill target in the adopted KMWLP could similarly be seen as insufficient ambition for sustainable waste management. A third option would therefore be to avoid both of these situations, retaining the recycling ambition of the KMWLP and reducing the landfill target to promote more sustainable waste management.

Option C constitutes the 'do nothing' option in regard to safeguarding.

The 'do nothing' option in respect of the restoration of the landfill at Norwood Quarry is not considered a reasonable alternative to that proposed in the Partial Review. To leave the landfill unrestored would not be an acceptable approach to waste management activity.

Each of the identified alternatives above have been appraised against the SA framework and an assessment made of the likely impacts on sustainability objectives. The detailed results are set out in Appendix C and summarised in Section 6.2.

6. Sustainability Appraisal Findings and Recommendations

6.1. SA of the Early Partial Review as Proposed

The SA has appraised each of the policy changes which are proposed in the Early Partial Review. The methodology and assumptions used in undertaking the appraisal are set out in Section 5.

The detailed findings of the SA of policy changes are set out in Appendix B and summarised below.

Policy	Sustainability Objective								
	1 Biodiversity	2 Climate change	3 Community and wellbeing	4 Sustainable economic growth	5 Flood risk	6 Land	7 Landscape and the historic environment	8 Transport	9 Water
CSWS 4	+	0	+	+	0	0	0	?	0
CSW 5	+	0	?	0	0	0	+	0	0
CSW 6	0	0	0	0	0	0	0	0	0
CSW 7	+	0	+	+	0	0	0	?	0
CSW 8	+	+	+	+	+	0	0	0	0
CSW 12	0	0	0	0	0	0	0	0	0
CSW 14	0	0	0	0	0	0	0	0	0
DM 7	0	0	++	++/-	0	0	0	0	0
DM 8	0	0	+	++/-	0	0	0	+	0
Overall impacts	+	+	++	++/-	+	0	+	+	0

Table 8: Summary of Findings of SA of Partial Review Overall

Discussion

The Early Partial Review will promote increased reuse, recycling and recovery, which will have climate change benefits by reducing the emission of greenhouse gases from waste management and support the move towards a circular economy.

Ensuring restoration of the landfill in the event that insufficient flue ash is available to complete the landform will help to improve the landscape impacts of the site and remove any amenity impacts on communities from an unrestored site. Restoration plans include biodiversity benefits and these would be secured earlier than with original plans.

Promotion of energy recovery and heat will reduce emissions of greenhouse gases, helping to attenuate the

effects of climate change, particularly the pressures resulting on biodiversity and communities including from flood risk. Energy recovery will also recover economic benefits from waste and provide heat for homes and communities.

Improved safeguarding of mineral resources will help to ensure the availability of aggregates to support housing construction to sustain communities and support economic/industrial activity, although encouraging use of a non-renewable resource is not sustainable. Improved safeguarding of infrastructure for minerals and waste management and transport will also help to support construction and economic/industrial activity and help to ensure the economic transport of materials and availability of sustainable modes of transport.

6.1.1 Recommendations for Mitigating Adverse Effects

The SA has considered whether there is scope for making recommendations for measures to prevent, reduced and as fully as possible offset any significant adverse effects of the Early Partial Review. In practice, no significant adverse effects have been identified and therefore no mitigation recommendations are made.

6.2. SA of the Alternatives to the Early Partial Review as Proposed

Each of the identified alternatives above have been appraised against the SA framework and an assessment made of the likely impacts on sustainability objectives. The detailed results are set out in Appendix C and summarised below.

Option A

The sustainability implications of Option A are very unclear. For a number of sustainability objectives, there may be impacts associated with the allocation of waste sites as originally envisaged in the KMWLP but these are strongly dependent on the nature, scale and location of facilities which would be developed which are currently unknown. These are the effects on biodiversity, community wellbeing, flood risk, land use, landscape, historic assets and water quality and availability. However, developments will be required to comply with development management policies in the KMWLP therefore adverse effects are unlikely to be significant.

The likely effects from Option A on other sustainability objectives are also unclear because it is not known what the practical effect of allocating sites would be. Allocation of waste sites which are not required for Kent's waste may increase the distance waste is transported. Waste management facilities may be built that then source waste streams from outside the county, increasing the distances that waste is transported which could have adverse impacts on air quality, greenhouse gas emissions and transport networks, but would bring economic resources into the county. Alternatively, if there are insufficient local sources of waste, the facilities may simply not be built and no effects will occur.

Option B1

The impacts of Option B1 on several sustainability objectives are unclear. There may be positive or negative impacts on biodiversity, flood risk and water quality and availability through management of some waste at different levels of the waste hierarchy, but the impacts from waste management are more strongly dependent on how waste is managed at individual sites and where those sites are, which is not addressed by policy CSW 4.

The effect on other sustainability objectives is also unclear because the balance of beneficial and adverse effects is not known. A higher recycling target than in the Early Partial Review will support more sustainable waste management which will contribute to the county's economy and encourage reduced greenhouse gas emissions through greater resource efficiency, whereas a higher landfill target would reduce the capacity for energy recovery from waste thereby reducing the level of resources that can be recovered from waste and increasing greenhouse gas emissions. Higher recycling targets are likely to encourage additional vehicle movements to transport recyclables but the scale of effects is not likely to be significant for the county overall.

Option B2

Option B2 would have a range of positive impacts on sustainability objectives. A higher recycling target than in the Early Partial Review will support more sustainable waste management and innovation and encourage reduced greenhouse gas emissions through greater resource efficiency. A lower landfill target will facilitate the recovery of resources from waste that would otherwise be landfilled.

Higher recycling targets are likely to encourage additional vehicle movements to transport recyclables but the scale of effects is not likely to be significant for the county overall. Reduced greenhouse gas emissions will help to reduce the pressures on biodiversity arising from climate change and reduce the exposure of communities to flood risk compared to a lower recycling target, although the effects are more strongly dependent on how waste is managed at individual sites and where those sites are located, which is not addressed by policy CSW 4.

Option C

Retaining the safeguarding approach in policy DM 7 is likely to reduce the availability of primary aggregates available to support economic activity and housing growth with adverse effects on communities, although the use of non-renewable resources is not sustainable.

Loss of transportation infrastructure through weak safeguarding in policy DM 8 is likely to result in minerals and waste being transported in a less economically efficient manner than otherwise, and may result in the loss of sustainable modes of transport for materials, both of which would result in increased greenhouse gas emissions from waste and minerals transport, increased pressure on transport networks and potentially

adverse impacts on air quality and flood risk, although the significance of air quality and flood risk impacts is uncertain and to some extent location-dependent.

6.3. Cumulative Effects and Inter-Relationship Between Effects

Cumulative Effects

The SEA Directive requires assessment of an additional level of impacts in addition to straightforward direct impacts. These are specified as “secondary, cumulative, synergistic, short, medium and long-term permanent and temporary, positive and negative”. The following approach has been taken to identifying such impacts.

A number of different types of impact are set out in European Commission guidance:

- separate developments causing the same impact – cumulative;
- different impacts acting together on a receptor e.g. air pollution and land take – cumulative;
- plan impacts which give rise to other indirect impacts – secondary; and
- different impacts which together give rise to yet another impact – cumulative and secondary.

There is therefore a need to consider both secondary and cumulative impacts in the appraisal. Secondary impacts were considered as an integral part of the main appraisal work, and this is indicated in the appraisal matrices in Annexes B and C where impacts are either direct or indirect i.e. secondary. Certain other attributes are common to all types of impact: these are timescales (i.e. short, medium and long-term impacts), reversibility (i.e. permanent or temporary impacts) and whether the impacts are positive or negative. These attributes were also all considered as integral aspects of impact assessment, and this is similarly indicated in the appraisal matrices in Annexes B and C. Cumulative impacts are discussed in this section of the SA Report.

There are two types of situation that could give rise to cumulative impacts:

- the same effect arising from two or more different sources; and
- different effects where there is a relationship between the effects and potentially an interaction.

Synergistic effects are a type of cumulative impact. These are effects where the cumulative impact may be greater or smaller than the sum of the separate effects. Cumulative impacts were considered in the appraisal in two ways:

- the potential for different developments to give rise to the same type of effect; and
- the potential for interaction between different types of effect.

In order to assess the cumulative impacts arising from the Early Partial Review, the appraisal considered the

overall effect of the Early Partial Review as a whole on each of the SA objectives. The results of this are summarised in table 8 and discussed in section 6.1.

Cumulative Impacts in Combination with Other Plans and Strategies

The appraisal has considered the potential for effects arising from other plans and strategies which, in combination with effects arising from the Early Partial Review, may give rise to significant impacts. The results of the review of other plans and strategies and their potential to give rise to cumulative effects is set out below.

The following key plans/programmes have been identified that could give rise to significant cumulative impacts together with the Early Partial Review:

- Kent Minerals and Waste Local Plan 2013-30, Kent County Council, July 2016;
- Pre-Submission Minerals Sites Plan, Kent County Council, November 2018;
- Kent Joint Municipal Waste Management Strategy (KJMWMS) 2012/13 to 2020/21, Kent Resource Partnership;
- Kent Joint Municipal Waste Management Strategy Draft Strategy 2018/19 to 2020/21, Kent Resource Partnership, March 2018;
- Ashford Local Plan Submission Version, Ashford Borough Council, December 2017;
- Canterbury District Local Plan, Canterbury City Council, July 2017;
- Dartford Core Strategy, Dartford Borough Council, June 2011;
- Core Strategy, Dover District Council, February 2010;
- Gravesham Local Plan Core Strategy, Gravesham Borough Council, September 2014;
- Maidstone Borough Local Plan, Maidstone Borough Council, October 2017;
- Core Strategy, Sevenoaks District Council, February 2011;
- Shepway Core Strategy, Folkestone and Hythe District Council, September 2013;
- The Swale Borough Local Plan, Swale Borough Council, July 2017;
- Pre-Submission Draft Local Plan to 2031, Thanet District Council, July 2018;
- Local Plan Regulation 19 Pre-Submission Publication, Tonbridge and Malling Borough Council, September 2018;
- Core Strategy Development Plan Document, Tunbridge Wells Borough Council, June 2010.

The main cumulative effects will arise in combination with the adopted KMWLP. The development management policies in the KMWLP will ensure that negative effects associated with minerals and waste activity will be avoided or mitigated and biodiversity benefits are realised. The KMWLP gives support to economic activity by ensuring a supply of materials which will be supported by the changes in the Early Partial Review. The support for movement of minerals via wharves and rail will be assisted by the change to infrastructure safeguarding in the Early Partial Review. The support for recycling of aggregates will counterbalance the enhanced mineral safeguarding in the Early Partial Review. The objective to restore

waste management sites to the highest possible standard to sustainable afteruses will be supported by the Early Partial Review requirement for the restoration of the Norwood Quarry landfill site.

The Early Partial Review will support the recycling targets in the adopted Kent Joint Municipal Waste Strategy 2012/13 to 2020/21 and in the consultation draft revision of the Strategy of March 2018.

There is the potential for cumulative effects to arise in combination with District and Borough Local Plans. Development on sites in Local Plans that contain safeguarded mineral resources or safeguarded minerals and waste facilities will be required by policies DM 7 and DM 8 to demonstrate that the mineral will not be needlessly sterilised or the facilities have been fully considered and it is concluded that development would be acceptable. This will have an economic cost for the proposed development of the site which may affect the viability of development and delay its implementation. It may also delay community benefits associated with house construction or economic benefits associated with employment provision. The review of District and Borough Local Plans has shown that this is likely to arise in the case of all Boroughs and Districts apart from Maidstone and Swale.

Interrelationship Between Effects

The SEA Directive requires the appraisal to consider the interrelationship between the significant effects of the Early Partial Review. This has been done as an integral part of the appraisal of the sites and options, and examples of this can be found throughout Section 6 and Annexes B and C of this report. The main interrelationships found through the appraisal are highlighted below.

Impacts on biodiversity can arise through habitat loss, disturbance from noise and human activity, changes to the water environment, reductions in air quality and deposition of dust and other pollutants. These impacts have the potential to act in synergy with each other such that multiple pressures have a greater total impact than the sum of individual impacts. These impacts also have the potential to negatively affect human amenity, along with visual impacts.

Restoration of the landfill site will be of benefit to biodiversity by ensuring connectivity and protection and enhancement of green infrastructure. It will also help to protect landscape quality and help to promote the wellbeing of communities.

Changes in air quality can have significant consequences for human health and biodiversity, while improvements in air quality arising from more sustainable transport patterns will benefit human health and vulnerable species and ecosystems.

Flood risk reduction will have economic benefits by protecting homes and businesses from having to deal with the financial consequences of flooding.

The promotion of sustainable economic growth through provision of appropriate waste management facilities will help to sustain jobs and incomes and the wellbeing of communities. The economy and communities will be supported by the securing of mineral resources for construction and industry prior to other development.

7. How might we monitor the plan's impacts?

As required by the SEA Directive, a number of recommendations are made for indicators to monitor the likely significant impacts of the Early Partial Review. These are set out in Table 9 corresponding to the relevant impacts identified and summarised in the preceding chapters of this report.

One of the aims of monitoring as specified by the SEA Directive is to identify unforeseen adverse effects in order to be able to take appropriate remedial action. To enable this to be done, recommendations are also made in Table 9 for monitoring potential sustainability impacts that are not expected to occur as foreseen by the appraisal.

An Annual Monitoring Report is produced to monitor the implementation of the KMWLP, and the recommendations given below for monitoring should be incorporated within this.

Sustainability Objectives		Recommended Indicators
1	Biodiversity	Area of land proposed for biodiversity value through landfill restoration Area of land of biodiversity value created through restoration.
2	Climate change	Percentage of waste managed at different levels of waste hierarchy, by waste stream (LACW, C&I, CD&E): <ul style="list-style-type: none"> • Recycled/composted • Other recovery • Landfill.
3	Community and well-being	No practical indicators identified
4	Sustainable economic growth	Sales (tonnage) of aggregates by type and end use Capacity of waste facilities by type
5	Flood risk	Number of flood events per year
6	Land	Hectares of good quality agricultural land proposed in restoration plans. Hectares of good quality agricultural land created by restoration.
7	Landscape and the historic environment	No practical indicators identified
8	Transport	Sales (tonnage) of aggregates at wharves Sales (tonnage) of aggregates at rail depots Imports and exports (tonnages) of minerals across county boundary.
9	Water	No of water pollution events linked to landfill sites.

Table 9: Monitoring Recommendations

8. References

Related to SA of Kent MWLP (adopted 2016):

- AECOM, July 2016 – Sustainability Appraisal (SA) of the Kent MWDF – SA Adoption Statement
- Scott Wilson, March 2010 – SA Scoping Report – Introductory Paper URS, 2011 – Interim SA Report (Assessment of Preferred Options)
- URS, November 2013 – Sustainability Appraisal (SA) of the Kent Minerals and Waste Local Plan - SA Report (Consultation Draft)
- URS, July 2014 – Kent County Council: Draft Minerals and Waste Local Plan 2013-30 - Habitats Regulations Assessment
- URS, July 2014 – Sustainability Appraisal (SA) of the Kent Minerals and Waste Local Plan – SA Report Non-Technical Summary

Other references:

- UK Government (2004) Environmental Assessment of Plans and Programmes Regulations 2004
- UK Government (2012) The Town and Country Planning (Local Planning) (England) Regulations 2012
- UK Government (2018) The National Planning Policy Framework
- Kent County Council (2016) Kent Minerals and Waste Local Plan 2013-30,
- Kent County Council (2018) Pre-Submission Minerals Sites Plan,
- Kent Resource Partnership, Joint Municipal Waste Management Strategy (KJMWMS) 2012/13 to 2020/21
- Kent Resource Partnership (2018) Kent Joint Municipal Waste Management Strategy Draft Strategy 2018/19 to 2020/21
- Swale Borough Council (2017) The Swale Borough Local Plan

Appendix A: Summary of Relevant Policy Objectives from National Planning Policy Framework 2018 and A Green Future

National Planning Policy Framework

Economy

Planning policies should:

- set out a clear economic vision and strategy which positively and proactively encourages sustainable economic growth, having regard to Local Industrial Strategies and other local policies for economic development and regeneration;
- set criteria, or identify strategic sites, for local and inward investment to match the strategy and to meet anticipated needs over the plan period;
- seek to address potential barriers to investment, such as inadequate infrastructure, services or housing, or a poor environment; and
- be flexible enough to accommodate needs not anticipated in the plan, allow for new and flexible working practices (such as live-work accommodation), and to enable a rapid response to changes in economic circumstances.

Planning policies and decisions should enable:

- the sustainable growth and expansion of all types of business in rural areas, both through conversion of existing buildings and well-designed new buildings;
- the development and diversification of agricultural and other land-based rural businesses;
- it will be important to ensure that development is sensitive to its surroundings, does not have an unacceptable impact on local roads and exploits any opportunities to make a location more sustainable

Open space

Planning policies and decisions should protect and enhance public rights of way and access, including taking opportunities to provide better facilities for users, for example by adding links to existing rights of way networks including National Trails.

The designation of land as Local Green Space through local and neighbourhood plans allows communities to identify and protect green areas of particular importance to them. Designating land as Local Green Space should be consistent with the local planning of sustainable development and complement investment in sufficient homes, jobs and other essential services.

Transport

Transport issues should be considered from the earliest stages of plan-making and development proposals, so that:

- the potential impacts of development on transport networks can be addressed;
- opportunities to promote walking, cycling and public transport use are identified and pursued;
- the environmental impacts of traffic and transport infrastructure can be identified, assessed and taken into account – including appropriate opportunities for avoiding and mitigating any adverse effects, and for net environmental gains

Planning policies should be prepared with the active involvement of local highways authorities, other transport infrastructure providers and operators and neighbouring councils, so that strategies and investments for supporting sustainable transport and development patterns are aligned.

In assessing sites that may be allocated for development in plans, or specific applications for development, it should be ensured that:

- appropriate opportunities to promote sustainable transport modes can be – or have been – taken up, given the type of development and its location;
- safe and suitable access to the site can be achieved for all users; and
- any significant impacts from the development on the transport network (in terms of capacity and congestion), or on highway safety, can be cost effectively mitigated to an acceptable degree.

Green Belt

Certain forms of development are not inappropriate in the Green Belt provided they preserve its openness and do not conflict with the purposes of including land within it, including mineral extraction. Planning policies and decisions should recognise that some undeveloped land can perform many functions, such as for wildlife, recreation, flood risk mitigation, cooling/shading, carbon storage or food production.

Flood risk

Inappropriate development in areas at risk of flooding should be avoided by directing development away from areas at highest risk (whether existing or future). Where development is necessary in such areas, the development should be made safe for its lifetime without increasing flood risk elsewhere.

Development should only be allowed in areas at risk of flooding where it can be demonstrated that:

- within the site, the most vulnerable development is located in areas of lowest flood risk, unless there are overriding reasons to prefer a different location;
- the development is appropriately flood resistant and resilient;

- it incorporates sustainable drainage systems, unless there is clear evidence that this would be inappropriate;
- any residual risk can be safely managed; and
- safe access and escape routes are included where appropriate, as part of an agreed emergency plan.

Natural environment

Planning policies and decisions should contribute to and enhance the natural and local environment by:

- protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);
- recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;
- maintaining the character of the undeveloped coast, while improving public access to it where appropriate;
- minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;
- preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and
- remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.

Heritage assets

When considering the impact of a proposed development on the significance of a designated heritage asset, great weight should be given to the asset's conservation. Any harm to, or loss of, the significance of a designated heritage asset (from its alteration or destruction, or from development within its setting), should require clear and convincing justification.

Minerals

Planning policies should:

- provide for the extraction of mineral resources of local and national importance, but not identify new sites or extensions to existing sites for peat extraction;

- so far as practicable, take account of the contribution that substitute or secondary and recycled materials and minerals waste would make to the supply of materials, before considering extraction of primary materials, whilst aiming to source minerals supplies indigenously;
- safeguard mineral resources by defining Mineral Safeguarding Areas; and adopt appropriate policies so that known locations of specific minerals resources of local and national importance are not sterilised by non-mineral development where this should be avoided (whilst not creating a presumption that the resources defined will be worked);
- set out policies to encourage the prior extraction of minerals, where practical and environmentally feasible, if it is necessary for non-mineral development to take place;
- safeguard existing, planned and potential sites for: the bulk transport, handling and processing of minerals; the manufacture of concrete and concrete products; and the handling, processing and distribution of substitute, recycled and secondary aggregate material;
- set out criteria or requirements to ensure that permitted and proposed operations do not have unacceptable adverse impacts on the natural and historic environment or human health, taking into account the cumulative effects of multiple impacts from individual sites and/or a number of sites in a locality;
- when developing noise limits, recognise that some noisy short-term activities, which may otherwise be regarded as unacceptable, are unavoidable to facilitate minerals extraction; and
- ensure that worked land is reclaimed at the earliest opportunity, taking account of aviation safety, and that high quality restoration and aftercare of mineral sites takes place.

Waste

The Framework should be read in conjunction with the Government's planning policy for waste.

A Green Future: Our 25 Year Plan to Improve the Environment

Using and managing land sustainably

- Embedding an 'environmental net gain' principle for development, including housing and infrastructure
- Improving how we manage and incentivise land management, including designing and delivering a new environmental land management system
- Improving soil health and restoring and protecting our peatlands, including developing better information on soil health

- Focusing on woodland to maximise its many benefits
- Reducing risks from flooding and coastal erosion, including expanding the use of natural flood management solutions and putting in place more sustainable drainage systems

Recovering nature and enhancing the beauty of landscapes

- Protecting and recovering nature, including developing a Nature Recovery Network and providing opportunities for the reintroduction of native species
- Conserving and enhancing natural beauty, including reviewing National Parks and Areas of Outstanding Natural Beauty
- Respecting nature in how we use water and reforming our approach to water abstraction

Connecting people with the environment to improve health and wellbeing

- Helping people improve their health and wellbeing by using green spaces
- Creating more green infrastructure

Increasing resource efficiency and reducing pollution and waste

- Maximising resource efficiency and minimising environmental impacts at end of life.
 - Reducing food supply chain emissions and waste
 - Improving management of residual waste
 - Reducing the impact of wastewater
- Reducing pollution
 - Publishing a Clean Air Strategy
 - Curbing emissions from combustion plants and generators
 - Minimising the risk of chemical contamination in our water
 - Ensuring we continue to maintain clean recreational waters and warning about temporary pollution

Appendix B: SA of Policy Changes in Early Partial Review

Key

Impacts	Probability of effects	Direct or indirect effects	Reversibility
++ significant positive effect	L low probability	D direct effect	Y reversible effect
+ some positive effect	M medium probability	I indirect effect	N not reversible i.e. permanent effect
0 no effect	H high probability		
- some adverse effect			
-- significant adverse effect			
? uncertain effect			

Policy CSW4: Strategy for Waste Management Capacity. Reduces targets for percentage of waste going to landfill and for recycling/composting and increases targets for percentage of waste going for other recovery

	Sustainability Objective	Comments					
1	Biodiversity	Short	Med	Long	Prob	Dir/Ind	Rev?
		+	+	+	M	I	Y
		The policy as amended will encourage recycling of aggregates and therefore help to reduce the demand for virgin aggregates, thereby reducing the pressure for new mineral sites with reduced adverse impacts on biodiversity. However, the amended policy will give less encouragement to recycling of construction and demolition waste than the current policy.					
2	Climate change	Short	Med	Long	Prob	Dir/Ind	Rev?
		+/?	+/?	?	M	D	Y

		The amended policy will encourage increased reuse, recycling and recovery and therefore should have an overall positive impact upon climate change by reducing demand on resources and production of greenhouse gases. Increased recycling may increase the need for waste transport but the increase is not likely to be significant for the county as a whole.					
3	Community and well-being	Short	Med	Long	Prob	Dir/Ind	Rev?
		+	+	?	M	I	Y
		There are not likely to be any significant impacts on amenity and wellbeing as no new facilities are required to be developed by the policy. By promoting increased recycling, the policy will help to encourage the supply of recycled aggregates to support housing construction and avoid amenity impacts on communities from new mineral developments, although by lowering the recycling targets there will be less impetus to recycling of aggregates than under the current policy.					
4	Sustainable economic growth	Short	Med	Long	Prob	Dir/Ind	Rev?
		++	++	?	M	D	Y
		Increased reuse, recycling and recovery would contribute towards meeting agreed targets and support sustainable economic activity. Encouragement of increased recycling of aggregates will reduce the demand upon non-renewable resources, however the amended policy will give less encouragement to recycling of construction and demolition waste than the current policy..					
5	Flood risk	Short	Med	Long	Prob	Dir/Ind	Rev?
		0	0	0	H	I	N
		This change in policy is not specific to any particular sites, therefore is unlikely to have a demonstrable effect upon flood risk.					
6	Land	Short	Med	Long	Prob	Dir/Ind	Rev?
		0	0	?	H	D	N

		The amendment to policy is unlikely to have a significant effect on greenfield or Green Belt land or land with sensitive geology as no new developments will be required.					
7	Landscape and the historic environment	Short	Med	Long	Prob	Dir/Ind	Rev?
		0	0	?	H	D	N
		The amendment to policy is unlikely to have a significant effect on landscape or historic assets as no new developments will be required.					
8	Transport	Short	Med	Long	Prob	Dir/Ind	Rev?
		?	?	?	L	D	N
		By promoting increased recycling, the policy is likely to encourage additional vehicle movements to transport recyclables. The scale of the likely effect is not clear, but it is unlikely to be significantly greater than managing waste at the bottom of the waste hierarchy, particularly in the context of vehicle movements within the county overall.					
9	Water	Short	Med	Long	Prob	Dir/Ind	Rev?
		0	0	?	H	D	N
		The amendment to policy is unlikely to have a significant effect on water quality and availability as no new developments will be required.					

Policy CSW5: Strategic Site for Waste. Requires it to be demonstrated that the site can be suitably restored in the event that landfilling of hazardous (flue) dust ash residues from Energy from Waste plants were to cease before completion of the final landform. Deletes the requirement for an assessment of alternative management methods for flue ash.

	Sustainability Objective	Comments						
1	Biodiversity	Short	Med	Long	Prob	Dir/Ind	Rev?	
		0	+	?	L	I	N	
		The amendment to the policy requires suitable early restoration of the site in the event that landfill would cease before the final landform is complete. This may help to secure biodiversity benefits from restoration if the landfill is not complete. These benefits are likely to be secured earlier than with original plans.						
2	Climate change	Short	Med	Long	Prob	Dir/Ind	Rev?	
		0	0	0				
		Amendment to the policy will not affect climate change impacts of waste management.						
3	Community and well-being	Short	Med	Long	Prob	Dir/Ind	Rev?	
		0	?	+	M	I	N	
		By requiring suitable early restoration of the site in the event that landfill would cease before the final landform is complete, the policy will help to mitigate any adverse impacts on local residential properties arising from operations at the landfill from noise, dust and light and visual impacts from an unrestored site.						
4		Short	Med	Long	Prob	Dir/Ind	Rev?	
		0	0	0				

	Sustainable economic growth	Restoration of the landfill is unlikely to affect sustainable economic growth. Not undertaking an assessment of alternative management methods for flue ash is unlikely to affect sustainable economic growth as significant tonnages are already managed through alternative routes.					
5	Flood risk	Short	Med	Long	Prob	Dir/Ind	Rev?
		0	0	0			
		The amendment to policy will not affect flood risk.					
6	Land	Short	Med	Long	Prob	Dir/Ind	Rev?
		0	0	0			
		The amendment to policy will not affect the efficient use of land or sensitive geomorphology					
7	Landscape and the historic environment	Short	Med	Long	Prob	Dir/Ind	Rev?
		0	+	+	H	D	N
		By requiring suitable early restoration of the site in the event that landfill would cease before the final landform is complete, the policy will help to improve the landscape impacts from the site and enable landscape benefits of restoration to be ensured. There are no significant impacts on heritage assets from the amended policy.					
8	Transport	Short	Med	Long	Prob	Dir/Ind	Rev?
		0	0	0			
		The amendment to the policy is unlikely to alter levels of vehicle movements and therefore is unlikely to have a significant impact on transport networks or use of sustainable modes of transport.					

9	Water	Short	Med	Long	Prob	Dir/Ind	Rev?
		0	0	0			
		The amendment to policy will not result in any new sites to be developed and not result in any changes to the water environment therefore there is no likely impact on water quality or availability.					

CSW6: Location of built waste management facilities Removes reference to sites to be identified in the WSP

	Sustainability Objective	Comments						
1	Biodiversity	Short	Med	Long	Prob	Dir/Ind	Rev?	
		0	0	0				
		The change to the policy will have no effect on biodiversity.						
2	Climate change	Short	Med	Long	Prob	Dir/Ind	Rev?	
		0	0	0				
		The change to the policy will have no effect on climate change.						
3	Community and well-being	Short	Med	Long	Prob	Dir/Ind	Rev?	
		0	0	0				
		The change to the policy will have no effect on community and wellbeing.						
4	Sustainable economic growth	Short	Med	Long	Prob	Dir/Ind	Rev?	
		0	0	0				
		The change to the policy will have no effect on sustainable economic growth.						
5	Flood risk	Short	Med	Long	Prob	Dir/Ind	Rev?	
		0	0	0				
		No effect on flood risk from change to the policy						
		Short	Med	Long	Prob	Dir/Ind	Rev?	

6	Land	0	0	0				
		No effect on land use from change to the policy						
7	Landscape and the historic environment	Short	Med	Long	Prob	Dir/Ind	Rev?	
		0	0	0				
		No effect on landscape and the historic environment from change to the policy						
8	Transport	Short	Med	Long	Prob	Dir/Ind	Rev?	
		0	0	0				
		No effect on transport from change to the policy						
9	Water	Short	Med	Long	Prob	Dir/Ind	Rev?	
		0	0	0				
		No effect on water quality and sustainable water resource management from change to the policy						

Policy CSW7: Waste management for non-hazardous waste Removes figures for capacity gap and adds a requirement to move waste up the hierarchy

	Sustainability Objective	Comments					
1	Biodiversity	Short	Med	Long	Prob	Dir/Ind	Rev?
		+	+	+	M	I	Y
		The policy seeks to move waste up the hierarchy and recover by-products and residues. This should help to encourage recycling of construction and demolition waste as recycled aggregate which may reduce the demand for virgin materials thereby reducing the pressure for new mineral development and avoiding impacts on biodiversity from new sites. The policy does not address the locations or effects of development therefore will not affect impacts on biodiversity from waste developments.					
2	Climate change	Short	Med	Long	Prob	Dir/Ind	Rev?
		+	+	+	M	D	Y
		The change in policy aims to move waste up the hierarchy and therefore should have an overall positive impact upon climate change by reducing demand on resources and production of greenhouse gases. Increased recycling may increase the need for waste transport but the increase is not likely to be significant for the county as a whole.					
3	Community and well-being	Short	Med	Long	Prob	Dir/Ind	Rev?
		+	+	+	M	I	Y
		By promoting increased recycling, the policy will help to encourage the supply of recycled aggregates to support housing construction. The amendments to the policy will not change the likely impacts of waste management on the wellbeing of communities.					
4		Short	Med	Long	Prob	Dir/Ind	Rev?
		+	+	+	H	D	Y

	Sustainable economic growth	The policy seeks to promote reuse and recycling of materials and energy recovery which will contribute to moving towards the circular economy. Increased reuse / recycling will contribute towards meeting agreed targets, and identification and separation of recycled aggregate will reduce the demand upon non-renewable resources.					
5	Flood risk	Short	Med	Long	Prob	Dir/Ind	Rev?
		0	0	0			
This change in policy is not specific to any particular sites or the effects of development, therefore is unlikely to have any effect upon flood risk.							
6	Land	Short	Med	Long	Prob	Dir/Ind	Rev?
		0	0	0			
The policy does not deal with the location of facilities and therefore will have no impact on land use.							
7	Landscape and the historic environment	Short	Med	Long	Prob	Dir/Ind	Rev?
		0	0	0			
This change in policy is not specific to any particular sites or the effects of development, therefore is unlikely to have any effect upon landscape or the historic environment.							
8	Transport	Short	Med	Long	Prob	Dir/Ind	Rev?
		?	?	0	M	D	Y
By promoting increased recycling, the policy is likely to encourage additional vehicle movements to transport recyclables. The scale of the likely effect is not clear, but it is unlikely to be significantly greater than managing waste at the bottom of the waste hierarchy, particularly in the context of vehicle movements within the county overall.							

9	Water	Short	Med	Long	Prob	Dir/Ind	Rev?
		0	0	0			
		The change in policy does not address the locations or effects of development therefore is unlikely to affect water quality and availability.					

Policy CSW8: Other recovery facilities for non-hazardous waste Removes reference to sites to be identified in the WSP and adds a requirement for recovery of heat

	Sustainability Objective	Comments					
1	Biodiversity	Short	Med	Long	Prob	Dir/Ind	Rev?
		+	+	?	M	I	Y
		By promoting energy recovery and recovery of heat, the policy will help to minimise greenhouse gas emissions which will contribute to reducing the pressure on biodiversity from climate change.					
2	Climate change	Short	Med	Long	Prob	Dir/Ind	Rev?
		+	+	+	M	D	Y
		The change in policy promotes energy recovery and the recovery of heat, which will promote minimisation of climate change impacts arising from non-hazardous waste recovery facilities.					
3	Community and well-being	Short	Med	Long	Prob	Dir/Ind	Rev?
		+	+	+	M	I	Y
		By promoting energy recovery and recovery of heat, the change to policy will contribute to reducing the adverse effects on communities from climate change and could provide heat for homes.					
4	Sustainable economic growth	Short	Med	Long	Prob	Dir/Ind	Rev?
		+	+	+	H	D	N
		By promoting energy recovery and recovery of heat, the change to policy will contribute to recovering resources from waste which will make a small contribution to sustainable economic growth.					
		Short	Med	Long	Prob	Dir/Ind	Rev?

5	Flood risk	+ + + M I N						By promoting energy recovery and recovery of heat, the change to policy will contribute to reducing climate change impacts associated with waste and will make a contribution to reducing the risks of flooding.
6	Land	Short	Med	Long	Prob	Dir/Ind	Rev?	The amendment to policy is unrelated to land use.
		0	0	0				
7	Landscape and the historic environment	Short	Med	Long	Prob	Dir/Ind	Rev?	The amendment to policy is unrelated to protection and enhancement of landscape and the historic environment.
		0	0	0				
8	Transport	Short	Med	Long	Prob	Dir/Ind	Rev?	The amendment to policy is unrelated to sustainable transport objectives.
		0	0	0				
9	Water	Short	Med	Long	Prob	Dir/Ind	Rev?	The amendment to policy is unrelated to maintenance and improvement of water quality or sustainable water resource management.
		0	0	0				

Policy CSW12 Identifying sites for Hazardous waste. Removes reference to a site to be identified in the WSP for landfilling of asbestos waste

	Sustainability Objective	Comments						
1	Biodiversity	Short	Med	Long	Prob	Dir/Ind	Rev?	
		0	0	0				
		No effect on biodiversity from change to the policy						
2	Climate change	Short	Med	Long	Prob	Dir/Ind	Rev?	
		0	0	0				
		No effect on climate change from change to the policy						
3	Community and well-being	Short	Med	Long	Prob	Dir/Ind	Rev?	
		0	0	0				
		No effect on community and wellbeing from change to the policy						
4	Sustainable economic growth	Short	Med	Long	Prob	Dir/Ind	Rev?	
		0	0	0				
		No effect on sustainable economic growth from change to the policy						
5	Flood risk	Short	Med	Long	Prob	Dir/Ind	Rev?	
		0	0	0				
		No effect on flood risk from change to the policy						
6	Land	Short	Med	Long	Prob	Dir/Ind	Rev?	
		0	0	0				

		No effect on land use from change to the policy					
7	Landscape and the historic environment	Short	Med	Long	Prob	Dir/Ind	Rev?
		0	0	0			
		No effect on landscape and the historic environment from change to the policy					
8	Transport	Short	Med	Long	Prob	Dir/Ind	Rev?
		0	0	0			
		No effect on transport from change to the policy					
9	Water	Short	Med	Long	Prob	Dir/Ind	Rev?
		0	0	0			
		No effect on water quality and sustainable water resource management from change to the policy					

Policy CSW14 Disposal of Dredgings Removes reference for a site to be identified in the WSP for disposal of dredgings

	Sustainability Objective	Comments						
1	Biodiversity	Short	Med	Long	Prob	Dir/Ind	Rev?	
		0	0	0				
		No effect on biodiversity from change to the policy						
2	Climate change	Short	Med	Long	Prob	Dir/Ind	Rev?	
		0	0	0				
		No effect on climate change from change to the policy						
3	Community and well-being	Short	Med	Long	Prob	Dir/Ind	Rev?	
		0	0	0				
		No effect on community and wellbeing from change to the policy						
4	Sustainable economic growth	Short	Med	Long	Prob	Dir/Ind	Rev?	
		0	0	0				
		No effect on sustainable economic growth from change to the policy						
5	Flood risk	Short	Med	Long	Prob	Dir/Ind	Rev?	
		0	0	0				
		No effect on flood risk from change to the policy						
6	Land	Short	Med	Long	Prob	Dir/Ind	Rev?	
		0	0	0				

		No effect on land use from change to the policy					
7	Landscape and the historic environment	Short	Med	Long	Prob	Dir/Ind	Rev?
		0	0	0			
		No effect on landscape and the historic environment from change to the policy					
8	Transport	Short	Med	Long	Prob	Dir/Ind	Rev?
		0	0	0			
		No effect on transport from change to the policy					
9	Water	Short	Med	Long	Prob	Dir/Ind	Rev?
		0	0	0			
		No effect on water quality and sustainable water resource management from change to the policy					

Policy DM 7 Safeguarding Mineral Resources Strengthens the requirement on sites allocated in adopted local development plans to avoid needless sterilisation of minerals

	Sustainability Objective	Comments					
1	Biodiversity	Short	Med	Long	Prob	Dir/Ind	Rev?
		0	0	0			
No effect on biodiversity from change to the policy							
2	Climate change	Short	Med	Long	Prob	Dir/Ind	Rev?
		0	0	0			
No effect on climate change from change to the policy							
3	Community and well-being	Short	Med	Long	Prob	Dir/Ind	Rev?
		++	++	?	H	D	Y
The policy aims to ensure that mineral resources will not be needlessly sterilised. This will help to ensure the supply of minerals to support housing construction to sustain communities.							
4	Sustainable economic growth	Short	Med	Long	Prob	Dir/Ind	Rev?
		++/-	++/-	?	H	D	Y
The policy aims to ensure that mineral resources will not be needlessly sterilised. This will help to ensure the supply of minerals to support economic/industrial activity. However, the exploitation of non-renewable resources is not sustainable.							
5	Flood risk	Short	Med	Long	Prob	Dir/Ind	Rev?
		0	0	0			

		No effect on flood risk from change to the policy					
6	Land	Short	Med	Long	Prob	Dir/Ind	Rev?
		0	0	0			
		No effect on land use from change to the policy					
7	Landscape and the historic environment	Short	Med	Long	Prob	Dir/Ind	Rev?
		0	0	0			
		No effect on landscape and the historic environment from change to the policy					
8	Transport	Short	Med	Long	Prob	Dir/Ind	Rev?
		0	0	0			
		No effect on transport from change to the policy					
9	Water	Short	Med	Long	Prob	Dir/Ind	Rev?
		0	0	0			
		No effect on water quality and sustainable water resource management from change to the policy					

Policy DM 8 Safeguarding Minerals Management, Transportation, Production and Waste Management Facilities Strengthens requirements on sites allocated in a local development plan to strengthen safeguarding of minerals and waste infrastructure

	Sustainability Objective	Comments						
1	Biodiversity	Short	Med	Long	Prob	Dir/Ind	Rev?	
		0	0	0				
		No effect on biodiversity from change to the policy						
2	Climate change	Short	Med	Long	Prob	Dir/Ind	Rev?	
		0	0	0				
		No effect on climate change from change to the policy						
3	Community and well-being	Short	Med	Long	Prob	Dir/Ind	Rev?	
		++	++	?	H	D	Y	
		The policy aims to ensure that mineral supply infrastructure will not be needlessly lost. This will help to ensure the economic supply of minerals to support housing construction to sustain communities and that waste management infrastructure is in place to support housing growth.						
4	Sustainable economic growth	Short	Med	Long	Prob	Dir/Ind	Rev?	
		++/-	++/-	?	H	D	Y	
		The policy aims to ensure that mineral and waste infrastructure will not be needlessly lost. This will help to ensure the economic supply of minerals and waste management infrastructure to support economic/industrial activity. However, the exploitation of non-renewable resources is not sustainable.						
		Short	Med	Long	Prob	Dir/Ind	Rev?	

5	Flood risk	0	0	0				
		No effect on flood risk from change to the policy						
6	Land	Short	Med	Long	Prob	Dir/Ind	Rev?	
		0	0	0				
		No effect on land use from change to the policy						
7	Landscape and the historic environment	Short	Med	Long	Prob	Dir/Ind	Rev?	
		0	0	0				
		No effect on landscape and the historic environment from change to the policy						
8	Transport	Short	Med	Long	Prob	Dir/Ind	Rev?	
		++	++	++	M	D	Y	
		By ensuring that waste and minerals transport infrastructure is not needlessly lost, the change to policy will help to ensure waste and minerals can travel economically and will help to promote the use of sustainable modes of transport.						
9	Water	Short	Med	Long	Prob	Dir/Ind	Rev?	
		0	0	0				
		No effect on water quality and sustainable water resource management from change to the policy						

Appendix C: Detailed Findings of Alternatives to Early Partial Review as Proposed

Key:

Impacts	Probability of effects	Direct or indirect effects	Reversibility
++ significant positive effect	L low probability	D direct effect	Y reversible effect
+ some positive effect	M medium probability	I indirect effect	N not reversible i.e. permanent effect
0 no effect	H high probability		
- some adverse effect			
-- significant adverse effect			
? uncertain effect			

Option A: Allocate Sites for Waste Management.

	Sustainability Objective	Comments					
1	Biodiversity	Short	Med	Long	Prob	Dir/Ind	Rev?
		?	?	?	L	D	N
		Allocation of waste sites may have adverse impacts on biodiversity, but these will be dependent on the nature, scale and location of sites which is unknown.					
2	Climate change	Short	Med	Long	Prob	Dir/Ind	Rev?
		?	?	?	L	I	N
		Allocation of waste sites which are not required for Kent’s waste may increase the climate change impacts of waste management although the likelihood of impacts is unclear. Waste management facilities may be built that then need to source					

		waste streams from outside the county, which would increase greenhouse gas emissions from waste transport. Alternatively, if there are insufficient local sources of waste, the facilities may simply not be built.					
3	Community and well-being	Short	Med	Long	Prob	Dir/Ind	Rev?
		?	?	?	L	D	N
		Allocation of waste sites may have adverse impacts on communities in the locality of sites from waste management activities and waste transport, but these will be dependent on the nature, scale and location of sites which is unknown. Allocation of waste sites which are not required for Kent's waste may increase the distance waste is transported, although the likelihood of impacts is unclear. Waste management facilities may be built that then source waste streams from outside the county, increasing the distances that waste is transported which could have impacts on air quality. Alternatively, if there are insufficient local sources of waste, the facilities may simply not be built.					
4	Sustainable economic growth	Short	Med	Long	Prob	Dir/Ind	Rev?
		?	?	?	L	D	N
		Allocation of waste sites which are not required for Kent's waste may increase the economic contribution of the waste sector to Kent's economy although the likelihood of impacts is unclear. Waste management facilities may be built that then source waste streams from outside the county, so bringing an economic resource into the county. Alternatively, if there are insufficient local sources of waste, the facilities may simply not be built.					
5	Flood risk	Short	Med	Long	Prob	Dir/Ind	Rev?
		?	?	?	L	D	N
		Allocation of waste sites may have adverse or beneficial impacts on flood risk in the locality of sites, but these will be dependent on the nature, scale and location of sites which is unknown.					
		Short	Med	Long	Prob	Dir/Ind	Rev?

6	Land	?	?	?	L	D	N	
		Allocation of waste sites may have adverse impacts on the efficient use of land and on sensitive locations, but these will be dependent on the nature, scale and location of sites which is unknown.						
7	Landscape and the historic environment	Short	Med	Long	Prob	Dir/Ind	Rev?	
		?	?	?	L	D	N	
		Allocation of waste sites may have adverse impacts on landscape and historic assets, but these will be dependent on the nature, scale and location of sites which is unknown.						
8	Transport	Short	Med	Long	Prob	Dir/Ind	Rev?	
		?	?	?	L	D	N	
		Allocation of waste sites which are not required for Kent's waste may increase the distance waste is transported, although the likelihood of impacts is unclear. Waste management facilities may be built that then source waste streams from outside the county, increasing the distances that waste is transported which could have impacts on air quality, greenhouse gas emissions and transport networks. Alternatively, if there are insufficient local sources of waste, the facilities may simply not be built.						
9	Water	Short	Med	Long	Prob	Dir/Ind	Rev?	
		?	?	?	L	D	N	
		Allocation of waste sites may have adverse impacts on water quality and availability, but these will be dependent on the nature, scale and location of sites which is unknown.						

Option B1: Retain existing waste hierarchy targets.

	Sustainability Objective	Comments						
1	Biodiversity	Short	Med	Long	Prob	Dir/Ind	Rev?	
		?	?	?	L	I	N	
		The impact of the option on biodiversity is unclear, but impacts from waste management are more strongly dependent on how waste is managed at individual sites and where those sites are, which is not addressed by policy CSW4.						
2	Climate change	Short	Med	Long	Prob	Dir/Ind	Rev?	
		?	?	?	L	D	N	
		The impacts on climate change are uncertain. A higher recycling target than the Partial Review will encourage reduced greenhouse gas emissions through greater resource efficiency, whereas a higher landfill target would reduce the capacity for energy recovery from waste thereby increasing greenhouse gas emissions. The overall balance of impacts is not known.						
3	Community and well-being	Short	Med	Long	Prob	Dir/Ind	Rev?	
		0	0	0				
		Retaining the waste hierarchy targets from the adopted KMWLP is unlikely to affect communities and wellbeing.						
4	Sustainable economic growth	Short	Med	Long	Prob	Dir/Ind	Rev?	
		?	?	?	M	D	Y	
		The impacts on sustainable economic growth are uncertain. A higher recycling target than the Partial Review will support more sustainable waste management which will contribute to the county's economy, whereas a higher landfill target would make economic growth less sustainable and reduce the level of resources that can be recovered from waste. The overall balance of impacts is not known.						

5	Flood risk	Short	Med	Long	Prob	Dir/Ind	Rev?	
		0	0	0				
The impact of the option on flood risk is unclear in view of the uncertainty about the climate change effect of retaining the targets, but impacts from waste management are more strongly dependent on how individual waste sites are developed and where those sites are, which is not addressed by policy CSW4.								
6	Land	Short	Med	Long	Prob	Dir/Ind	Rev?	
		0	0	0				
Waste hierarchy targets will have no significant effect on the efficient use of land or sensitive locations.								
7	Landscape and the historic environment	Short	Med	Long	Prob	Dir/Ind	Rev?	
		0	0	0				
Waste hierarchy targets will have no significant effect on landscape and historic assets.								
8	Transport	Short	Med	Long	Prob	Dir/Ind	Rev?	
		?	?	?	L	I	Y	
By promoting increased recycling, the higher targets are likely to encourage additional vehicle movements to transport recyclables. The scale of the likely effect is not clear, but it is unlikely to be significantly greater than managing waste at other levels of the waste hierarchy, particularly in the context of vehicle movements within the county overall.								
9	Water	Short	Med	Long	Prob	Dir/Ind	Rev?	
		?	?	?	L	I	N	
The impact of the option on water quality and availability is unclear, but impacts from waste management are more strongly dependent on how waste is managed at individual sites, particularly landfill, and where those sites are, which is not addressed								

		by policy CSW4.
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Option B2: Retain targets for recycling and reduce targets for landfill.

	Sustainability Objective	Comments						
1	Biodiversity	Short	Med	Long	Prob	Dir/Ind	Rev?	
		+	+	?	L	I	N	
		The option could have a positive effect on biodiversity by reducing the pressures arising from climate change. However, impacts from waste management are more strongly dependent on how waste is managed at individual sites and where those sites are, which is not addressed by policy CSW4.						
2	Climate change	Short	Med	Long	Prob	Dir/Ind	Rev?	
		+	+	?	M	I	N	
		The option will have a positive impact on climate change. A higher recycling target than the Partial Review will encourage reduced greenhouse gas emissions through greater resource efficiency, whereas a lower landfill target will enable energy recovery from waste which would otherwise be landfilled.						
3	Community and well-being	Short	Med	Long	Prob	Dir/Ind	Rev?	
		+	+	?	M	D	Y	
		Reduced greenhouse gas emissions from higher recycling targets will contribute to a reduction in flood risk which will have positive benefits for community wellbeing, although the effects are more strongly dependent on how sites are developed and where those sites are.						
4		Short	Med	Long	Prob	Dir/Ind	Rev?	
		++	++	?	H	D	Y	

Page 404

	Sustainable economic growth	The option will have a positive impact on sustainable economic growth. A higher recycling target than the Partial Review will promote more sustainable waste management and innovation, while a lower landfill target than the KMWLP will facilitate the recovery of resources from waste and reduce the need for unsustainable landfill.					
5	Flood risk	Short	Med	Long	Prob	Dir/Ind	Rev?
		+	+	+	L	I	N
		The option could have a positive impact on flood risk by reducing greenhouse gas emissions, but impacts from waste management are more strongly dependent on how individual waste sites are developed and where those sites are, which is not addressed by policy CSW4.					
6	Land	Short	Med	Long	Prob	Dir/Ind	Rev?
		0	0	0			
		Waste hierarchy targets will have no significant effect on the efficient use of land or sensitive locations.					
7	Landscape and the historic environment	Short	Med	Long	Prob	Dir/Ind	Rev?
		0	0	0			
		Waste hierarchy targets will have no significant effect on landscape and historic assets.					
8	Transport	Short	Med	Long	Prob	Dir/Ind	Rev?
		?	?	?	L	I	Y
		By promoting increased recycling, the higher targets are likely to encourage additional vehicle movements to transport recyclables. The scale of the likely effect is not clear, but it is unlikely to be significantly greater than managing waste at other levels of the waste hierarchy, particularly in the context of vehicle movements within the county overall.					

9	Water	Short	Med	Long	Prob	Dir/Ind	Rev?
		?	?	?	L	I	N
		The impact of the option on water quality and availability is unclear, but impacts from waste management are more strongly dependent on how waste is managed at individual sites, particularly landfill, and where those sites are, which is not addressed by policy CSW4.					

Option C: Do not change safeguarding policies DM7 and DM8

	Sustainability Objective	Comments						
1	Biodiversity	Short	Med	Long	Prob	Dir/Ind	Rev?	
		0	0	0				
		Retaining the safeguarding approach in policies DM 7 and DM 8 is unlikely to affect biodiversity.						
2	Climate change	Short	Med	Long	Prob	Dir/Ind	Rev?	
		-	-	-	M	D	N	
		Retaining the safeguarding approach in policy DM 7 is unlikely to affect the climate change impacts of mineral extraction. However, loss of transportation infrastructure through weak safeguarding policy is likely to result in minerals and waste being transported in a less economically efficient manner than otherwise, and may result in the loss of sustainable modes of transport for materials, both of which would result in increased greenhouse gas emissions from waste and minerals transport.						
3	Community and well-being	Short	Med	Long	Prob	Dir/Ind	Rev?	
		-	-	-	M	D	N	
		Retaining the safeguarding approach in policy DM 7 is likely to reduce the availability of primary aggregates available to support housing growth. Loss of transportation infrastructure through weak safeguarding in policy DM 8 is likely to result in minerals and waste being transported in a less economically efficient manner than otherwise, and may result in the loss of sustainable modes of transport for materials, both of which would result in increased greenhouse gas emissions from waste and minerals transport and potentially adverse impacts on air quality although the significance of air quality impacts is uncertain and to some extent location-dependent.						
4		Short	Med	Long	Prob	Dir/Ind	Rev?	
		-	-	?	M	D/I	N	

	Sustainable economic growth	Retaining the safeguarding approach in policy DM 7 is likely to reduce the availability of primary aggregates available to support economic and industrial activity. Loss of transportation infrastructure through weak safeguarding in policy DM 8 is likely to result in minerals and waste being transported in a less economically efficient manner than otherwise, which will increase the cost of materials and adversely affect profitability of the waste sector and the wider economy.					
5	Flood risk	Short	Med	Long	Prob	Dir/Ind	Rev?
		-	-	-	L	I	N
		Loss of transportation infrastructure through weak safeguarding policy is likely to result in greater greenhouse gas emissions than if infrastructure were retained, which may increase flood risk impacts. However, the flood risk impacts from waste management are more strongly dependent on how individual waste sites are developed and where those sites are.					
6	Land	Short	Med	Long	Prob	Dir/Ind	Rev?
		0	0	0			
		There are unlikely to be significant impacts on land use from the safeguarding policy approach.					
7	Landscape and the historic environment	Short	Med	Long	Prob	Dir/Ind	Rev?
		0	0	0			
		No effect on landscape and the historic environment from the safeguarding policy approach.					
8	Transport	Short	Med	Long	Prob	Dir/Ind	Rev?
		-	-	-	H	D	N
		Loss of transportation infrastructure through weak safeguarding policy is likely to result in less sustainable transport movements, greater transport distances and potentially the use of less sustainable modes of transport for materials through the loss of sustainable transport infrastructure.					

9	Water	Short	Med	Long	Prob	Dir/Ind	Rev?
		0	0	0			
		No effect on water quality and sustainable water resource management from the approach to safeguarding policy.					

Appendix D: Contribution of Other Plans and Strategies to Cumulative Effects

Kent Minerals and Waste Local Plan 2013-30, Kent County Council, July 2016

The Plan identifies and sets out the following for the period up to, and including, the year 2030:

- the long term Spatial Vision and Strategic Objectives for Kent's minerals and waste
- the delivery strategy for minerals and waste planning that identifies how the objectives will be achieved in the plan period
- two areas where strategic mineral and waste development is likely to occur
- the development management policies that will be used when the County Council makes decisions on planning applications
- the framework to enable annual monitoring of the policies within the Plan

The Plan will be mainly used by the County Council when determining applications for minerals and waste facilities.

Planning for Minerals in Kent will:

- Seek to deliver a sustainable, steady and adequate supply of land-won minerals including aggregates, silica sand, crushed rock, brickearth, chalk and clay, building stone and minerals for cement manufacture.
- Facilitate the processing and use of secondary and recycled aggregates and become less reliant on land-won construction aggregates.
- Safeguard economic mineral resources for future generations and all existing, planned and potential mineral transportation and processing infrastructure (including wharves and rail depots and production facilities).
- Restore minerals sites to a high standard that will deliver sustainable benefits to Kent communities.

Planning for Waste in Kent will:

- Move waste up the Waste Hierarchy, reducing the amount of non-hazardous waste sent to landfill.
- Encourage waste to be used to produce renewable energy incorporating both heat and power if it cannot be re-used or recycled.
- Ensure waste is managed close to its source of production.
- Make provision for a variety of waste management facilities to ensure that Kent remains at the forefront of waste management with solutions for all major waste streams, while retaining flexibility to adapt to changes in technology.

- Ensure sufficient capacity exists to meet the future needs for waste management.
- Restore waste management sites to a high standard that will deliver sustainable benefits to Kent communities.

General objectives for the Minerals and Waste Local Plan:

- Encourage the use of sustainable modes of transport for moving minerals and waste long distances and minimise road miles.
- Ensure minerals and waste developments contribute towards the minimisation of, and adaptation to, the effects of climate change. This includes helping to shape places to secure radical reductions in greenhouse gas emissions and supporting the delivery of renewable and low carbon energy and associated infrastructure.
- Ensure minerals and waste sites are sensitive to both their surrounding environment and communities, and minimise their impact on them.
- Enable minerals and waste developments to contribute to the social and economic fabric of their communities through employment opportunities.

Objectives for minerals:

- Seek to ensure the delivery of adequate and steady supplies of sand and gravel, chalk, brickearth, clay, silica sand, crushed rock, building stone and minerals for cement during the plan period, through identifying sufficient sites and safeguarding mineral bearing land for future generations.
- Promote and encourage the use of recycled and secondary aggregates in place of land-won minerals.
- Safeguard existing, planned and potential sites for mineral infrastructure including wharves and rail depots across Kent to enable the on-going transportation of marine dredged aggregates, crushed rock and other minerals as well as other production facilities.
- Enable the small-scale, low-intensity extraction of building stone minerals for heritage building products.
- Restore minerals sites to the highest possible standard to sustainable afteruses that benefit the Kent community economically, socially or environmentally. Where possible, afteruses should conserve and improve local landscape character and incorporate opportunities for biodiversity to meet targets outlined in the Kent Biodiversity Action Plan, the Biodiversity Opportunity Areas and the Greater Thames Nature Improvement Area.
- Encourage the sustainable use of the inert non-recyclable fraction of Construction, Demolition and Excavation Waste for quarry restoration.

Objectives for waste:

- Increase amounts of Kent's waste being re-used, recycled or recovered. Promote the movement of

waste up the Waste Hierarchy by enabling the waste industry to provide facilities that help to deliver a major reduction in the amount of Kent's waste being disposed of in landfill.

- Promote the management of waste close to the source of production in a sustainable manner using appropriate technology and, where applicable, innovative technology, such that net self sufficiency is maintained throughout the plan period.
- Use waste as a resource to provide opportunities for the generation of renewable energy for use within Kent through energy from waste and technologies such as gasification and aerobic/anaerobic digestion.
- Provide suitable opportunities for additional waste management capacity to enable waste to be managed in a more sustainable manner.
- Restore waste management sites to the highest possible standard to sustainable afteruses that benefit the Kent community economically, socially or environmentally. Where possible, afteruses should conserve and improve local landscape character and incorporate opportunities for biodiversity to meet targets outlined in the Kent Biodiversity Action Plan, the Biodiversity Opportunity Areas and the Greater Thames Nature Improvement Area.

Mineral working for sand will be granted planning permission at sites identified in the Minerals Sites Plan subject to meeting the requirements set out in the relevant site schedule in the Mineral Sites Plan and the development plan.

Economic mineral resources are safeguarded from being unnecessarily sterilised by other development by the identification of Mineral Safeguarding Areas and Mineral Consultation Areas.

The strategy for waste management capacity in Kent is to provide sufficient waste management capacity to manage at least the equivalent of the waste arising in Kent plus some residual non-hazardous waste from London. As

The proposed extension areas for Norwood Quarry and Landfill Site, Isle of Sheppey are together identified as the Strategic Site for Waste in Kent.

The Plan contains a number of development management policies to ensure that waste and minerals development is sustainable, avoids or minimises adverse impacts on the environment and communities and provides benefits where possible. These are:

- Policy DM 1: Sustainable Design
- Policy DM 2: Environmental and Landscape Sites of International, National and Local Importance
- Policy DM 3: Ecological Impact Assessment
- Policy DM 4: Green Belt
- Policy DM 5: Heritage Assets
- Policy DM 6: Historic Environment Assessment
- Policy DM 7: Safeguarding Mineral Resources

- Policy DM 8: Safeguarding Minerals Management, Transportation, Production & Waste Management Facilities
- Policy DM 9: Prior Extraction of Minerals in Advance of Surface Development
- Policy DM 10: Water Environment
- Policy DM 11: Health and Amenity
- Policy DM 12: Cumulative Impact
- Policy DM 13: Transportation of Minerals and Waste
- Policy DM 14: Public Rights of Way
- Policy DM 15: Safeguarding of Transportation Infrastructure
- Policy DM 16: Information Required in Support of an Application
- Policy DM 17: Planning Obligations
- Policy DM 18: Land Stability
- Policy DM 19: Restoration, Aftercare and After-use
- Policy DM 20: Ancillary Development
- Policy DM 21: Incidental Mineral Extraction
- Policy DM 22: Enforcement

Contribution to Cumulative Effects¹¹

Development management policies will ensure that negative effects associated with minerals and waste development are avoided or mitigated, and the potential for minerals development to contribute to biodiversity objectives is realised.

There will be economic benefits from ensuring a supply of materials for strategically important industries / economic activities.

Support is provided for recycling of aggregates which reduces the need to extract primary aggregates, providing benefits for land use and landscape. There is also a focus on ensuring that the non-recyclable fraction of this inert waste is targeted at quarry restoration projects as a priority.

The MWLP is supportive of efforts to increase the movement of minerals via wharves which should have the effect of encouraging supply of marine dredged aggregates and hence reducing the need for land won aggregates.

Support provided to extraction of minerals for heritage building products will have benefits for heritage and the historic environment

Ensuring strict adherence to the 'proximity principle' will provide transport benefits, and hence also climate change mitigation benefits.

¹¹ Findings from Sustainability Appraisal of Kent Minerals and Waste Local Plan, URS, July 2014

The minerals strategy includes a focus on the safeguarding of wharves and railheads across the County to enable the on-going importation of marine dredged aggregates, crushed rock and other minerals by sea and rail, rather than by road.

Pre-Submission Minerals Sites Plan, Kent County Council, 2018

The draft Plan identifies three sites for extraction of minerals in Kent:

- Chapel Farm
- Moat Farm
- Stonecastle Farm Quarry Extensions

Contribution to Cumulative Effects¹²

Each of the sites contain or are adjacent to some form of biodiversity asset or biodiversity value and impacts are possible in each case.

The Minerals Sites Plan is likely to increase emissions of greenhouse gases overall by generating additional HGV movements and increasing the energy requirements for mineral processing on site. However, these are insignificant when considered in the context of emissions from the county as a whole.

Some negative impacts are possible on community wellbeing, mainly due to the potential for negative impacts on residential amenity from operations and transport, and also on the diversion or removal of footpaths.

The Minerals Sites Plan will help to contribute to economic growth by providing a supply of minerals to support construction and potentially other economic sectors that depend on aggregates. By facilitating the extraction of primary aggregates, the Minerals Sites Plan is exploiting a non-renewable resource, which cannot be considered sustainable.

Two of the minerals sites lie within Flood Zone 3. In these cases, it must be demonstrated that development can take place without adversely affecting flood risk and where possible contributing to a reduction in overall flood risk.

There is the potential for the sites to have limited impacts on landscape and on the historic environment.

The scale of the cumulative impact of the MSP on traffic is not expected to be great given the predicted number of movements and the context of all traffic movements in the county.

Each of the minerals sites have the potential for significant impacts on hydrology/hydrogeology and water

¹² Findings from Sustainability Appraisal of Minerals Sites Plan, Amey, November 2018

quality.

Kent Joint Municipal Waste Management Strategy (KJMWMS) 2012/13 to 2020/21, Kent Resource Partnership

The objectives of the Strategy are to:

- Deliver the best possible outcomes on materials handled by the KRP from household and other appropriate sources
- Deliver the best possible value for money to Kent taxpayers taking account of whole- service costs paid through Council
- Secure the best possible outcomes through effective partnership working among the 13 Kent councils, through the SE7 Project, with government, and across the supply chain

By 2015/16 the KRP will reduce household waste arisings by at least 5% (based on 2010/11 levels); recycle/compost at least 45%; and send no more than 10% to landfill.

By 2020/21 the KRP will reduce household waste arisings by at least 10% (based on 2010/11 levels); recycle/compost at least 50%; and send no more than 5% to landfill. Our ambition is to get as close to zero untreated waste to landfill as possible.

The KRP will work with the government, the SE7 Project, and others to develop and deliver a waste reduction plan including practical measures to help achieve these policies

The KRP will take account of the need for the right quality of recyclates for the right end uses as included with the revised Waste Framework Directive and transposition into UK legislation.

The KRP will continue its high performance in minimising the use of landfill. The KRP will assist householders to maximise the amounts they recycle and re-use, and avoid putting the following items into residual waste bins: paper, cardboard, glass, metals, wood, plastics, textiles, waste electricals, batteries, and food.

Contribution to Cumulative Effects

By reducing the amount of waste generated and increasing recycling and composting, the strategy will encourage reduced greenhouse gas emissions from waste management which will help to reduce the pressures on biodiversity and communities from climate change impacts. It will also promote a more sustainable economy. Minimising landfill will avoid potential landscape and water quality impacts and impacts on communities from new landfill sites.

Kent Joint Municipal Waste Management Strategy Draft Strategy 2018/19 to 2020/21, Kent Resource Partnership, March 2018

The Kent Resource Partnership (KRP) will support the transformation of Kent into a circular economy, where the value of material resources flowing into and through the region are retained, generating employment, skills and training opportunities, and realising wider economic, environmental, health and wellbeing benefits for the local and regional community and beyond.

The KRP is committed to delivering efficiency and quality in resource management and waste services, with focus on: -

- Maximising the 'value' of resources that we manage from households, in terms of realising the social, environmental and economic opportunities;
- Providing the best possible value for money service to the Kent taxpayer, taking into account whole service costs;
- Realising opportunities to improve services now and in the future through engagement, collaboration and working in partnership with the supply chain; and
- Supporting future thinking through ongoing research and evidence that will facilitate the transition into a circular economy for Kent.

Up until 2020/21, the KRP will achieve a year on year reduction to its Kent-wide residual household waste per household (kg/h'hold) tonnage.

By 2020/21, the KRP will:

- recycle and compost at least 50% of household waste tonnage
- ensure no more than 5% of Kent's municipal waste ends at landfill.
- develop a joint approach to facilitate the procurement of third sector/reuse providers/charities in managing and delivering a reuse service for bulky waste.

The KRP will explore the possibility of implementing recycling on-the-go initiatives, and other similar activities aimed at recovering resources. Additionally the KRP will look to engage and work with the supply chain to deliver recycling on-the-go in key areas.

The KRP will publish its Materials End Destinations Publication on an annual basis and continue its transparent approach to reflect where all material resources end up.

Contribution to Cumulative Effects

If adopted, the draft Strategy will promote sustainable economic growth by maximizing the resources gained from waste materials and assisting the transition to a circular economy in Kent.

By reducing the amount of waste generated and increasing recycling and composting, the strategy will encourage reduced greenhouse gas emissions from waste management which will help to reduce the pressures on biodiversity and communities from climate change impacts. It will also promote a more sustainable economy. Minimising landfill will avoid potential landscape and water quality impacts and impacts on communities from new landfill sites.

Ashford Local Plan Submission Version, Ashford Borough Council, December 2017

The draft Local Plan contains no policy or text on the approach to sites that contain safeguarded mineral resources or minerals or waste facilities.

Contribution to Cumulative Effects

Development on sites that contain safeguarded mineral resources or safeguarded minerals or waste facilities will be required to demonstrate that the mineral will not be needlessly sterilised or the facilities have been fully considered and it is concluded that development would be acceptable. This will have an economic cost for the proposed development of the site which may affect the viability of development and delay its implementation. It may also delay community benefits associated with house construction or economic benefits associated with employment provision.

Canterbury District Local Plan, Canterbury City Council, July 2017

The Local Plan notes that East Quay at Whitstable is safeguarded as a mineral transport facility and states that any proposals will have to have regard to policy CSM6 of the KMWLP.

However, there is no policy or text on the approach to sites that contain safeguarded mineral resources or minerals or waste facilities.

Contribution to Cumulative Effects

Development on sites that contain safeguarded mineral resources or safeguarded minerals or waste facilities will be required to demonstrate that the mineral will not be needlessly sterilised or the facilities have been fully considered and it is concluded that development would be acceptable. This will have an economic cost for the proposed development of the site which may affect the viability of development and delay its implementation. It may also delay community benefits associated with house construction or economic benefits associated with employment provision.

Dartford Core Strategy, Dartford Borough Council, June 2011

The Core Strategy requires development of wharves to be subject to a study demonstrating cargo handling at the wharf is not viable. It notes safeguarded wharves at Johnsons Wharf.

However, it contains no policy or text on the approach to sites that contain safeguarded mineral resources or other minerals or waste facilities.

Contribution to Cumulative Effects

Development on sites that contain safeguarded mineral resources or safeguarded minerals or waste facilities will be required to demonstrate that the mineral will not be needlessly sterilised or the facilities have been fully considered and it is concluded that development would be acceptable. This will have an economic cost for the proposed development of the site which may affect the viability of development and delay its implementation. It may also delay community benefits associated with house construction or economic benefits associated with employment provision.

Core Strategy, Dover District Council, February 2010

District Council supports the development of a new freight and passenger ferry terminal at Dover Western Docks provided it safeguards the aggregates wharf facility identified in the Kent Minerals Local Plan

However, the Core Strategy contains no policy or text on the approach to sites that contain safeguarded mineral resources or other minerals or waste facilities.

Contribution to Cumulative Effects

Development on sites that contain safeguarded mineral resources or safeguarded minerals or waste facilities will be required to demonstrate that the mineral will not be needlessly sterilised or the facilities have been fully considered and it is concluded that development would be acceptable. This will have an economic cost for the proposed development of the site which may affect the viability of development and delay its implementation. It may also delay community benefits associated with house construction or economic benefits associated with employment provision.

Gravesham Local Plan Core Strategy, Gravesham Borough Council, September 2014

The Core Strategy contains a strategic objective to, as a minimum, safeguard the capacity of commercial wharves and other sites needed to support the River Thames as a working waterway.

It notes aggregates operations at Northfleet Embankment East Regeneration Area. The Council will seek to ensure, as a minimum, that sufficient minerals capacity is maintained through appropriate alternative provision, so that wider regeneration initiatives do not prejudice the parallel requirements of the Kent

Minerals and Waste Local Plan. Proposals for the Key Site will be required to retain Red Lion Wharf for commercial river based use that is appropriate to context, subject to capacity for the transshipment of minerals being maintained through appropriate alternative provision off-site.

The Core Strategy notes that there are a number of commercial wharves on the riverside at Gravesend and Northfleet, and that the KMWLP proposes that a number of these are safeguarded, protecting them from development which could prejudice their future use for minerals importation. Subject to planning controls being applicable, the safeguarding of wharves is supported by the Council in general terms to enable river freight handling to reduce dependence on road freight transport. However, the Council considers that a more flexible approach is appropriate where wider regeneration initiatives are being sought and it is possible to rationalise assets in ways that, as a minimum, maintain necessary capacity for freight handling and provide equivalent or better facilities. This is the approach followed in Policy CS11 (Transport).

The loss of existing commercial wharves shown on the Policies Map and other land-side supporting infrastructure will not be supported unless a study and supporting evidence shows that they are no longer viable for marine related employment purposes or are incapable of being made so at reasonable cost, and it has been shown that there is no demand for them through an appropriate marketing exercise carried out in accordance with Council guidance, or appropriate alternative provision is available or will be provided as part of the rationalisation of facilities that, as a minimum, maintains capacity and provides equivalent or better facilities.

The Core Strategy contains no policy or text on the approach to sites that contain safeguarded mineral resources or other minerals or waste facilities.

Contribution to Cumulative Effects

Development on sites that contain safeguarded mineral resources or safeguarded minerals or waste facilities will be required to demonstrate that the mineral will not be needlessly sterilised or the facilities have been fully considered and it is concluded that development would be acceptable. This will have an economic cost for the proposed development of the site which may affect the viability of development and delay its implementation. It may also delay community benefits associated with house construction or economic benefits associated with employment provision.

Maidstone Borough Local Plan, Maidstone Borough Council, October 2017

The Local Plan notes safeguarded areas in allocated sites and requires an assessment of viability and practicability of extraction prior to development.

Contribution to Cumulative Effects

None

Core Strategy, Sevenoaks District Council, February 2011

The Core Strategy contains no policy or text on the approach to sites that contain safeguarded mineral resources or minerals or waste facilities.

Contribution to Cumulative Effects

Development on sites that contain safeguarded mineral resources or safeguarded minerals or waste facilities will be required to demonstrate that the mineral will not be needlessly sterilised or the facilities have been fully considered and it is concluded that development would be acceptable. This will have an economic cost for the proposed development of the site which may affect the viability of development and delay its implementation. It may also delay community benefits associated with house construction or economic benefits associated with employment provision.

Shepway Core Strategy, Folkestone and Hythe District Council, September 2013

The Core Strategy contains no policy or text on the approach to sites that contain safeguarded mineral resources or waste or minerals facilities.

Contribution to Cumulative Effects

Development on sites that contain safeguarded mineral resources or safeguarded minerals or waste facilities will be required to demonstrate that the mineral will not be needlessly sterilised or the facilities have been fully considered and it is concluded that development would be acceptable. This will have an economic cost for the proposed development of the site which may affect the viability of development and delay its implementation. It may also delay community benefits associated with house construction or economic benefits associated with employment provision.

The Swale Borough Local Plan, Swale Borough Council, July 2017

The Isle of Sheppey area strategy requires that, where appropriate, larger scale development proposals bring forward improvements to the A2500 Lower Road.

Completed transport schemes have highlighted a remaining local pinch point at the junction of Barton Hill Drive/Lower Road, Minster, where replacement of the existing traffic signals with a roundabout would relieve local congestion and facilitate better access to the eastern side of Sheppey. Key schemes identified to address the accessibility, connectivity and capacity issues in Swale include provision of a roundabout at Lower Road/ Barton Hill Drive A2500 to facilitate better access to eastern Sheppey.

Land west of Barton Hill Drive, Minster is allocated for some 620 dwellings, together with open space, landscaping and transport improvements.

The Local Plan identifies mineral safeguarding areas on the proposals map. It states that the Council will work with Kent County Council to identify and safeguard mineral reserves and the rail heads and wharves necessary to ensure the transport, import and export of minerals.

In the event that reserves are identified on sites allocated for development by this Local Plan, the Council will ensure that the developer works with the Minerals Planning Authority to ensure the timely working of the site, provided that there is a sustainable and viable outlet for the resource which allows extraction without an unreasonable impact on development coming forward in line with the safeguarding minerals and prior extraction policies contained in the Kent Minerals and Waste Local Plan.

The Local Plan identifies where safeguarded minerals are present on allocated sites and requires investigation of prior extraction.

Contribution to Cumulative Effects

The proposed development west of Barton Hill Drive may increase pressure on the A2500 Lower Road, but planned transport improvements should mitigate the potential adverse effects of the development and assist traffic flow on Lower Road.

Pre-Submission Draft Local Plan to 2031, Thanet District Council, July 2018

The growth of the Port of Ramsgate is supported as a source of employment and as an attractor of inward investment. The draft Local Plan notes that Kent Minerals and Waste Local Plan 2013-2030 proposes to safeguard the port for the importation of minerals into Kent.

Policy on development at Ramsgate Port states that this is supported where it would facilitate its improvement as a port for shipping, increase traffic through the port, and introduce new routes and complementary land based facilities including marine engineering, subject to:

- a demonstrable port-related need for any proposed land based facilities to be located in the area of the port, and a demonstrable lack of suitable alternative inland locations; and
- compatibility with the character and function of Ramsgate waterfront and the Royal Harbour as a commercial leisure facility; and
- an acceptable environmental assessment of the impact of the proposed development upon the harbour, its setting and surrounding property, and the impact of any proposed land reclamation upon nature conservation, conservation of the built environment, the coast and archaeological heritage, together with any proposals to mitigate the impact.

The draft Local Plan contains no policy or text on the approach to sites that contain safeguarded minerals or waste or minerals facilities.

Contribution to Cumulative Effects

Development on sites that contain safeguarded mineral resources or safeguarded minerals or waste facilities will be required to demonstrate that the mineral will not be needlessly sterilised or the facilities have been fully considered and it is concluded that development would be acceptable. This will have an economic cost for the proposed development of the site which may affect the viability of development and delay its implementation. It may also delay community benefits associated with house construction or economic benefits associated with employment provision.

Local Plan Regulation 19 Pre-Submission Publication, Tonbridge and Malling Borough Council, September 2018

Development will be required to comply with the relevant policies in the adopted Kent Minerals and Waste Local Plan and with the relevant policies of any additional minerals and waste development plan documents that are adopted at the time the planning application is determined.

However, there is no policy or text on the approach to sites that contain safeguarded mineral resources or waste or minerals facilities.

Contribution to Cumulative Effects

Development on sites that contain safeguarded mineral resources or safeguarded minerals or waste facilities will be required to demonstrate that the mineral will not be needlessly sterilised or the facilities have been fully considered and it is concluded that development would be acceptable. This will have an economic cost for the proposed development of the site which may affect the viability of development and delay its implementation. It may also delay community benefits associated with house construction or economic benefits associated with employment provision.

Core Strategy Development Plan Document, Tunbridge Wells Borough Council, June 2010

The Core Strategy contains no policy or text on the approach to sites that contain safeguarded mineral resources or minerals or waste facilities.

Contribution to Cumulative Effects

Development on sites that contain safeguarded mineral resources or safeguarded minerals or waste facilities will be required to demonstrate that the mineral will not be needlessly sterilised or the facilities have been

fully considered and it is concluded that development would be acceptable. This will have an economic cost for the proposed development of the site which may affect the viability of development and delay its implementation. It may also delay community benefits associated with house construction or economic benefits associated with employment provision.

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Sustainability Appraisal Report – SA of the draft Kent Minerals Sites Plan

Regulation 19 Consultation

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Executive Summary

Amey is commissioned to undertake Sustainability Appraisal (SA) in support of the Kent Minerals and Waste Local Plan (KMWLP) Minerals Sites Plan (MSP) preparation process. This report presents the interim outcomes of this process up to Regulation 19 stage (Pre-submission consultation).

The Kent Minerals and Waste Local Plan (KMWLP) was adopted in July 2016 and sets out the vision and objectives for Kent's minerals supply and waste management capacity from 2013 to 2030. It identified that the specific sites for minerals developments would be set out in the separate MSP which is the subject of this SA Report. The MSP is a land use plan produced by Kent County Council which identifies and allocates mineral sites within the county for the working and winning of minerals. The main objective of the MSP is to ensure that Kent has enough permitted mineral reserves over the plan period (until 2030) and 7 years beyond to meet plan making requirements. The following sites are proposed for allocation in the MSP:

- M3 Chapel Farm (western part only)
- M10 Moat Farm
- M13 Stonecastle Farm Quarry Extension

Various environmental, social and economic issues have been identified through reviewing a wide variety of plans and strategies, collecting baseline information and identifying sustainability issues and problems. These issues have informed the development of the sustainability appraisal framework, which consists of a set of sustainable development policy objectives as set out in Table 1 of the report. The Pre-submission MSP has been appraised against this set of sustainability objectives.

Each of the sites contain or are adjacent to some form of biodiversity asset or biodiversity value and impacts are possible in each case. It will be important for planning applications to fully assess the impacts on biodiversity, to provide mitigation where possible and where this is not possible to provide replacement habitat of equal value. Restoration proposals at two of the sites aim to restore the site to biodiversity habitat which will help to mitigate any potential loss.

Some negative impacts are possible on community wellbeing, mainly due to the potential for negative impacts on residential amenity from operations and transport, and also on the diversion or removal of footpaths. It should be possible for mitigation to adequately minimise impacts from dust, noise, vibration, light and visual impacts, although cumulative impacts are not likely to be significant.

Minerals sites generate vehicle movements accessing and leaving the sites. The scale of the cumulative impact of the MSP overall is not expected to be great given the predicted number of movements and the context of all traffic movements in the county.

Each of the minerals sites have the potential for significant impacts on hydrology/hydrogeology and water quality. However, the cumulative impacts from all sites in the Minerals Sites Plan is not expected to be

significant for the county as a whole.

Two of the minerals sites lie within Flood Zone 3. In these cases, it must be demonstrated that development can take place without adversely affecting flood risk and where possible contributing to a reduction in overall flood risk.

Two of the sites lie within the Metropolitan Green Belt, in which case it must be demonstrated that operations will not constitute inappropriate development or constitute very special circumstances. Given that sites will be restored to wetland habitat, lasting cumulative impacts on the Green Belt are not envisaged.

There is the potential for the sites to have limited impacts on landscape and on the historic environment. However, it will be possible to provide mitigation such that the significance of impacts is minimised. Adverse impacts on the AONBs are not likely to be significant.

The Minerals Sites Plan will help to contribute to economic growth by providing a supply of minerals to support construction and potentially other economic sectors that depend on aggregates. By facilitating the extraction of primary aggregates, the Minerals Sites Plan is exploiting a non-renewable resource, which cannot be considered sustainable.

The Minerals Sites Plan is likely to increase emissions of greenhouse gases overall by generating additional HGV movements and increasing the energy requirements for mineral processing on site. However, these are not significant when considered in the context of emissions from the county as a whole.

Recommendations are made in the report for measures to prevent, reduce and offset the likely significant adverse effects of the sites proposed for allocation in the MSP. These recommendations are for measures that must be addressed in detailed proposals submitted at planning application stage.

In November 2017, Kent County Council identified a longer list of 9 site allocation options following a consultation and gathering of more detailed information on the potential sites. These site options have been appraised as 'reasonable alternatives' for the MSP.

In addition to site alternatives, it was considered that there was potential to consider an alternative to allocating some sites for land-won aggregates in Kent. This alternative is to increase the supply of secondary and recycled aggregates, marine dredged aggregates and land-won aggregates from outside of Kent. This alternative has also been appraised and the results of this are set out in this report.

Contents

Executive Summary	1
1. Non-Technical Summary	5
1.1. Background	5
1.2. What is the plan seeking to achieve?	5
1.3. What's the situation now and how would it change without the plan (sustainability 'baseline')?	6
1.4. Characteristics of areas likely to be significantly affected.....	8
1.5. Areas of Particular Environmental Importance	8
1.6. SA Framework and Sustainability Objectives	8
1.7. Likely Significant Effects of the Pre-submission MSP	10
1.8. Recommendations for Mitigating Adverse Effects.....	12
1.9. Reasons for Selecting Alternatives Dealt With	13
1.10. Methodology	15
1.11. Monitoring Recommendations	16
2. Introduction	17
2.1. Background	17
2.2. The SA Process.....	17
2.3. Compliance with the SEA Directive and Regulations.....	18
3. The Scope of the Sustainability Appraisal	21
3.1. What is the plan seeking to achieve?.....	21
3.2. What's the sustainability context?.....	22
3.3. What's the situation now and how would it change without the plan (sustainability 'baseline')?	24
3.4. What are the key sustainability issues?	26
3.5. Characteristics of areas likely to be significantly affected.....	28
3.6. Areas of Particular Environmental Importance.....	28
4. How has the plan developed up to this point?.....	32
4.1. Background to the Development of the SA.....	32
4.2. The Development of the MSP.....	33
4.3. Difficulties Encountered	39
5. How has the appraisal at this current stage been undertaken? [Sustainability Appraisal Methodology]	41
5.1. SA Framework and Sustainability Objectives	41
5.2. Applying the Framework.....	43
6. Sustainability Appraisal Findings and Recommendations	48
6.1. SA of the Site Selection Methodology.....	48
6.2. SA of the Sites	49
6.3. SA of the Alternatives to Land-Won Sand and Gravel	53

6.4. Cumulative Effects and Inter-Relationship Between Effects 54

7. How might we monitor the plan’s impacts? 59

8. References..... 61

Appendix A: Summary of Relevant Policy Objectives from National Planning Policy Framework July 2018 ... 63

Appendix B: Assumptions Underpinning Appraisal of Sites (2012 vs 2016)..... 68

Appendix C: SA of Site Selection Methodology – Assessment Matrix (Information Sought from Applicants & Method of RAG Assessment) 75

Appendix D: Detailed Findings and Recommendations of SA of Sites 78

Appendix E: Detailed Findings and Recommendations of SA of Alternatives to Land-Won Aggregates..... 111

Appendix F: Contribution of Other Plans and Strategies to Cumulative Effects..... 116

Tables

Table 1 Questions that must be answered (sequentially) within the SA Report..... 18

Table 2 Requirements of SEA Directive and Compliance of SA Report..... 20

Table 3 Additional Aspects of Sustainability Context since 2013 23

Table 4 Sustainability Objectives established during SA Scoping (Scott Wilson, 2010)..... 32

Table 5 Sustainability Assessment Framework used in SA Report (Consultation Draft) (URS, 2013) 32

Table 6 SA Framework..... 43

Table 7: Summary of Findings of SA of KCC Site Selection Methodology 49

Table 8: Summary of Findings of SA of Sites 50

Table 9: Monitoring Recommendations 60

Figures

Figure 1 Summary of the parallel planning and SA processes..... 39

Figure 2 Effects categories (URS, 2012) 43

1. Non-Technical Summary

1.1. Background

Amey is commissioned to undertake Sustainability Appraisal (SA) in support of the Kent Minerals and Waste Local Plan (KMWLP) Minerals Sites Plan (MSP) preparation process. This report presents the interim outcomes of this process up to Regulation 19 stage (Pre-submission consultation). SA is a mechanism for considering and communicating the likely effects of a draft plan, and alternatives, with a view to avoiding and mitigating adverse effects and maximising positives.

1.2. What is the plan seeking to achieve?

The MSP is a land use plan produced by Kent County Council which identifies and allocates mineral sites within the county for the working and winning of minerals. From 11 'Reasonable Alternatives', the following sites are proposed for allocation:

- M3 Chapel Farm
- M10 Moat Farm
- M13 Stonecastle Farm Quarry Extension

The main objective of the MSP is to ensure that Kent has enough permitted mineral reserves over the plan period (until 2030) and 7 years beyond to meet plan making requirements. Site M3 is a soft sand site and M10 and M13 are sharp sand and gravel sites.

The Kent Minerals and Waste Local Plan (KMWLP) was adopted in July 2016 and sets out the vision and objectives for Kent's minerals supply and waste management capacity from 2013 to 2030. The KMWLP did not allocate specific sites suitable for minerals and waste development except for two strategic sites - one for cement production (and related mineral reserves) at Holborough in the Medway Valley and one for hazardous waste disposal at Norwood Quarry on the Isle of Sheppey). The KMWLP identified that the specific sites for minerals developments would be set out in the separate MSP which is the subject of this SA Report. The selection of sites will be based on the policies of the KMWLP and sites proposed for development will be required to comply with the policies of the KMWLP.

In parallel with the development of the MSP, Kent County Council is also undertaking a Partial Review of the KMWLP. Policies CSW7, CSW8, CSW 12 and CSW 14 of the KMWLP state that a Waste Sites Plan will be prepared that will identify sites suitable for accommodating facilities needed to address the identified capacity shortfalls. A review of the future needs for waste management facilities in Kent has recently been undertaken and this has concluded that there is now no need for the development of this additional capacity. The policies will be amended by the Partial Review to reflect this updated understanding. Policies DM7 and DM8 set out criteria to allow development that may affect safeguarded sites to proceed

in certain prescribed circumstances. Policies DM 7 and DM 8 will be amended by the Partial Review to ensure that the safeguarding is not unduly rigid in its application. The Partial Review has been subject to SA and the results of this are set out in a separate SA Report.

1.3. What's the situation now and how would it change without the plan (sustainability 'baseline')?

The following is a summary of the sustainability baseline characteristics in Kent.

Environmental baseline

- Kent is considered to be one of the UK's most wildlife-rich counties. This is a result of its varied geology, long coastline, landscape history and southerly location / proximity to mainland Europe.
- Natura 2000 habitat is concentrated around the coast, particularly around the Thames Gateway (much within Medway UA), the Isle of Thanet, the Stour Estuary and Dungeness. Sites of Special Scientific Interest (SSSI) cover 8.5% of the county. The county contains c.10% of England's ancient woodland.
- The Thames Gateway is also acknowledged for its national importance due to 'brownfield' biodiversity.
- The last century has seen major losses and declines of species within Kent. Amongst the most important drivers of biodiversity loss in Kent are: the direct loss of land of value to wildlife to built-development or intensive farming, which has reduced and fragmented populations; and the effects of climate change.
- Analysis at the County level has informed the location of 16 Biodiversity Opportunity Areas (BOAs) across Kent covering 40% of the land area (BOAs cover 35% of the South East).
- Since 2008 there has been a reduction in carbon dioxide emissions of 0.8 tonnes per capita. Nonetheless, this figure remains higher than regional and national emission levels.
- In 2010 it is estimated that 1050 early deaths occurred as a result of just PM2.5 air pollution across Kent & Medway [KMAQM, 2015]
- Kent is considered to be the most at risk local flood authority in England. Flooding has a significant impact on residents and the economy, with such effects predicted to worsen due to climate change.
- In Kent there are many catchments where there is little or no water available for abstraction during dry periods. Pressures are particularly notable in Kent as it is one of the driest parts of England and Wales, coupled with high population density and household water use. Over the next few decades, there will be increasing pressures from the rising population and associated development. Looking further ahead, climate change could have a major impact on the water that will be available for consumption. [EA, 2012]

Social baseline

- Kent had an estimated population of 1,466,500 in mid-2011. By 2021 the population of Kent is projected to increase by 9.4% from 2012. The age group with the greatest projected percentage change in population is 65+ (21.2%).
- In mid-2011, Kent had the largest rural population of any county in the South East (29%) and identified problems of 'rural deprivation', e.g. associated with access to services, facilities and housing affordability.
- In terms of the 'Index of Multiple Deprivation', Kent ranks within England's least deprived third of authorities. However, significant areas within Kent are amongst England's most deprived 20%. Life expectancy is 8.2 years lower for men and 4.5 years lower for women in the most deprived areas of Kent than in the least deprived areas.

- Early death rates from cancer, heart disease and stroke have fallen and are better than the England average. About 18.4% of Year 6 children are classified as being obese, lower than the average for England. However, estimated levels of adult obesity are worse than the England average.
- Climate change projections highlight an increase in risk to people from flooding; and hotter and sunnier summers leading to public health risks.

Economic baseline

- In 2011, the Gross Domestic Household Income (GDHI) in Kent was £16,855, 5.1% above the UK average, while the South East region was 12.8% above the UK average.
- 2011 was the first year since 2008 that the 'birth' of enterprises in the Kent exceeded the number of 'deaths'.
- During the period October 2011 to September 2012, the employment rate for residents of Kent was 71.1%, a lower figure than that for the South East (74.6%) and close to that for England (70.7%).
- In Kent, the unemployment rate for October 2011 to September 2012 was 7.4% of the population aged 16 years and over; greater than the rate for the South East (5.8%) and close to the rate for England (7.9%).
- The 'public administration, education and health' sector employs the highest proportion of persons aged 16 to 64 (30.7%). Agriculture and fishing employs the lowest proportion of the population aged 16 to 64 (1.6%). These are also the lowest / highest employers at regional and national levels.

How would the baseline would change without the Minerals Sites Plan?

There is a degree of uncertainty about how the baseline might change without the adoption of the MSP. Mineral sites will still come forward for development and these will be required to comply with the development management policies of the KMWLP. This includes policies on the protection and enhancement of: biodiversity value, landscape, Green Belt, heritage assets, the water environment, health and amenity (including air quality) and transportation. Long term trends in environmental quality are likely to continue.

However, without the MSP there will be less certainty that Kent would be able to provide enough minerals to support the expected future demand for minerals from construction and industry. In such an event, there would be a need to source minerals from elsewhere. This may mean importing minerals from other parts of the country, which will have adverse effects on transport networks and air quality. Alternatively, increased quantities may need to be secured from secondary and recycled aggregates and/or marine dredged aggregates. If sufficient minerals of the right type cannot be found, construction and industrial growth may be checked. This could lead to insufficient homes being provided with adverse effects on people and communities. Minerals in Kent would not provide sufficient material to support economic growth, in which case employment levels could reduce and GDP and household incomes may fall.

Emissions of carbon dioxide may be unchanged without the MSP. Mineral sites will still be developed and emissions of carbon dioxide from mineral operations will continue largely the same as at current levels. However, if imports from other parts of the country are required, this will lead to increased carbon dioxide emissions associated with mineral transport and associated risks to people and communities.

The social baseline is unlikely to be affected without the adoption of the MSP. Population, levels of deprivation and health are unlikely to be significantly different with or without the MSP. Mineral sites will still come forward for development and these must comply with the policies of the KMWLP, including on health and amenity.

1.4. Characteristics of areas likely to be significantly affected

The SEA Directive requires that the appraisal describes the characteristics of areas likely to be significantly affected by the MSP. In deciding which areas are likely to be significantly affected by the MSP, the SA has made reference to the spatial distribution of the proposed minerals sites to determine whether there are any areas of Kent which contain a particular concentration of minerals sites that could give rise to significant effects. This was not found to be the case.

1.5. Areas of Particular Environmental Importance

There are five European sites designated under European Directives 79/409/EEC and 92/43/EEC and which are located within a 20km radius of the 8 sites which have been considered as 'reasonable alternatives' for the MSP. These are:

- Dungeness SAC;
- Dungeness, Romney Marsh & Rye Bay SPA & Ramsar site;
- Ashdown Forest SAC and SPA;
- North Downs Woodlands SAC and
- Peter's Pit SAC.

The characteristics of these designated sites are described in detail in Section 3.6 of the main report.

1.6. SA Framework and Sustainability Objectives

Various environmental, social and economic issues have been identified through reviewing a wide variety of plans and strategies, collecting baseline information and identifying sustainability issues and problems. These issues have informed the development of the sustainability appraisal framework, which consists of a set of sustainable development policy objectives (sustainability objectives) as set out in Table 1. Following due diligence in terms of the context and baseline conditions, the Framework and Sustainability Objectives for the SA of the MSP has been developed using that produced by URS (2013). The relationship between the 2010 Scoping and 2013 SA Report objectives is presented in Table 1 below, which also expands on the detail of the objectives and the additions made following the 2017 Scoping exercise and review of the NPPF 2018 and the 25 Year Environment Plan.

Sustainability Objectives (URS, 2013)		Corresponding SO (Scott Wilson, 2010)	Detail – including additions resulting from MPS SA Scoping (Amey, 2017) and additions resulting from review of NPPF and 25YEP
1	Biodiversity	SO2	<p>Ensure that development will not impact on important elements of the biodiversity resource and where possible contributes to the achievement of the Kent BAP and other strategies</p> <ul style="list-style-type: none"> – Add to the biodiversity baseline by creating opportunities for targeted habitat creation (which, ideally, contributes to local or landscape scale habitat networks). – Avoid hindering plans for biodiversity conservation or enhancement – Support increased access to biodiversity
2	Climate change	SO5	<p>Address the causes of climate change through reducing emissions of greenhouse gases through energy efficiency and energy generated from renewable sources</p> <ul style="list-style-type: none"> – Promote sustainable design and construction of facilities and support wider efforts to reduce the carbon footprint of minerals operations.
3	Community and well-being	SO9, SO7	<p>Support efforts to create and sustain sustainable communities, particularly the improvement of health and well-being; and support the delivery of housing targets</p> <ul style="list-style-type: none"> – Help to redress spatial inequalities highlighted by the Index of Multiple deprivation. – Help to tackle more hidden forms of deprivation and exclusion, such as that which is experienced in rural areas and particular socio-economic groups within communities. – Ensure that the necessary aggregates are available for building, and that the necessary waste infrastructure is in place to support housing growth – Ensure that minerals development does not contribute to poor air quality particular reference to PM2.5. – Protect and enhance public rights of way and access – Protect local green space
4	Sustainable economic growth	SO11	<p>Support economic growth and diversification</p> <ul style="list-style-type: none"> – Support the development of a dynamic, diverse and knowledge-based economy that excels in innovation with higher value, lower impact activities – Stimulate economic revival and targeted employment generation in deprived areas
5	Flood risk	SO1	<p>Reduce the risk of flooding and the resulting detriment to public wellbeing, the economy and the environment</p> <ul style="list-style-type: none"> – Ensure that development does not lead to increased flood risk on or off site

6	Land	SO8	<ul style="list-style-type: none"> – Seek to mitigate or reduce flood risk through developments that are able to slow water flow and promote groundwater recharge <p>Make efficient use of land and avoid sensitive locations</p> <ul style="list-style-type: none"> – Make best use of previously developed land – Avoid locations with sensitive geomorphology – Recognise the economic and other benefits of the best and most versatile agricultural land - Prevent inappropriate development in the Green Belt
7	Landscape and the historic environment	SO3	<p>Protect and enhance Kent's countryside and historic environment</p> <ul style="list-style-type: none"> – Protect the integrity of the AONBs and other particularly valued or sensitive landscapes – Take account of the constraints, opportunities and priorities demonstrated through landscape characterisation assessments and other studies at the landscape scale. – Protect important heritage assets and their settings, as well as take account of the value of the character of the wider historic environment
8	Transport	SO6	<p>Reduce and minimise unsustainable transport patterns and facilitate the transport of minerals and waste by the most sustainable modes possible</p> <ul style="list-style-type: none"> – Minimise minerals and waste transport movements and journey lengths; and encourage transport by rail and water. – Ensure that minerals and waste transport does not impact on sensitive locations, including locations already experiencing congestion and locations where planned growth or regeneration is reliant on good transport networks.
9	Water	SO4	<p>Maintain and improve the water quality of the Kent's rivers, ground waters and coasts, and achieve sustainable water resources management</p> <ul style="list-style-type: none"> – Ensure that minerals and waste development seeks to promote the conservation of water resources wherever possible particular reference to abstraction. – Avoid pollution of ground or surface waters, particularly in areas identified as being at risk or sensitive
Scoped out of URS (2013)		SO10 [waste]	

Table 1 SA Framework

1.7. Likely Significant Effects of the Pre-submission MSP

The sites that are proposed for allocation are M3 Chapel Farm (western part only), M10 Moat Farm and M13 Stonecastle Farm Quarry Extension. The following table summarises the conclusions about the impact of the

MSP overall with these three sites proposed for allocation.

Site	Sustainability Objective								
	1 Biodiversity	2 Climate change	3 Community and wellbeing	4 Sustainable economic growth	5 Flood risk	6 Land	7 Landscape and the historic environment	8 Transport	9 Water
M3 Chapel Farm	-	-	-	++/-	0	-	-/?	?	-
M10 Moat Farm	?/-	0	-	++/-	?	?	-/?	0	-
M13 Stonecastle Farm Quarry	-/+	0	0	++/-	?	0/?	?	0	-/?
Overall impacts	-	-	-	++/-	?	?	-/?	?	-/?

Table 2: Summary of Findings of SA of MSP Overall

Each of the sites contain or are adjacent to some form of biodiversity asset or biodiversity value and impacts are possible in each case. It will be important for planning applications to fully assess the impacts on biodiversity, to provide mitigation where possible and where this is not possible to provide replacement habitat of equal value. Restoration proposals at two of the sites aim to restore the site to biodiversity habitat which will help to mitigate any potential loss.

The Minerals Sites Plan is likely to increase emissions of greenhouse gases overall by generating additional HGV movements and increasing the energy requirements for mineral processing on site. However, these are insignificant when considered in the context of emissions from the county as a whole.

Some negative impacts are possible on community wellbeing, mainly due to the potential for negative impacts on residential amenity from operations and transport, and also on the diversion or removal of footpaths. It should be possible for mitigation to adequately minimise impacts from dust, noise, vibration, light and visual impacts, although cumulative impacts are not likely to be significant.

The Minerals Sites Plan will help to contribute to economic growth by providing a supply of minerals to support construction and potentially other economic sectors that depend on aggregates. By facilitating the extraction of primary aggregates, the Minerals Sites Plan is exploiting a non-renewable resource, which cannot be considered sustainable.

Two of the minerals sites lie within Flood Zone 3. In these cases, it must be demonstrated that development can take place without adversely affecting flood risk and where possible contributing to a reduction in overall flood risk.

One of the minerals sites contains soil which is classed as the best and most versatile agricultural land,

although restoration to agricultural land is proposed and therefore the impact of the MSP on soil quality is not likely to be significant. Two of the sites lie within the Metropolitan Green Belt, in which case it must be demonstrated that operations will not constitute inappropriate development or constitute very special circumstances. Given that sites will be restored to wetland habitat, lasting cumulative impacts on the Green Belt are not envisaged.

There is the potential for the sites to have limited impacts on landscape and on the historic environment. However, it will be possible to provide mitigation such that the significance of impacts is minimised. Adverse impacts on the AONBs are not likely to be significant.

Minerals sites generate vehicle movements accessing and leaving the sites. The majority of these are HGV movements and it is estimated that these will range between 4 movements per hour to 8 movements per hour depending on the site. In addition, staff vehicles will access the sites, around an estimated 10 movements per day. For sites M10 and M13, operations are planned to run sequentially with existing extraction in the locality so that the impacts from vehicles are likely to be no greater than existing impacts. The scale of the cumulative impact of the MSP overall is not expected to be great given the predicted number of movements and the context of all traffic movements in the county. It is unlikely that the Minerals Sites Plan will support the use of sustainable modes of transport for minerals, although the KMWLP safeguards railheads and wharves to support rail and water transport of minerals.

Each of the minerals sites have the potential for significant impacts on hydrology/hydrogeology and water quality. Restoration to wetland could affect local hydrology. However, the cumulative impacts from all sites in the Minerals Sites Plan is not expected to be significant for the county as a whole.

1.8. Recommendations for Mitigating Adverse Effects

Recommendations are made in the detailed appraisal of sites in Appendix D for measures to prevent, reduce and offset the likely significant adverse effects of the sites proposed for allocation in the MSP. These recommendations are for measures that must be addressed in detailed proposals submitted at planning application stage. These measures address impacts on:

- Biodiversity habitats and species
- Amenity, including on public access, noise, dust, vibration, visual impacts and light
- Air quality
- Flood risk
- Green Belt
- Landscape
- Designated and undesignated heritage assets
- Road network
- Water quality and hydrology

1.9. Reasons for Selecting Alternatives Dealt With

A Refresh Call for Sites took place from December 2016 to March 2017, resulting in 38 sites being submitted to KCC for selection assessment, accompanied by a wide range of detailed technical and operational impact data from applicants. For a site to be considered to be a Mineral Site Option it had to:

- Align with the objectives of the adopted KMWLP and scope of the Sites Plan: The KMWLP sets out the minerals supply needs and waste management capacity provision over the period 2013-2030 and the Sites Plan needs to identify sufficient sites to contribute to this requirement.
- Be justified: The site should represent an appropriate option based on a desktop assessment of the opportunities and constraints associated with its location.
- Be deliverable: Development of the site should not result in severe adverse effects that would affect its deliverability, and its development should also be supported by the landowner

A number of sites were ruled out of consideration as reasonable alternatives and therefore were not subject to KCC's Regulation 18 'Minerals Sites Plan Options Consultation'.

Kent County Council published a short list of options¹ for minerals sites being considered as allocations in the MSP. These sites were subject to an initial screening as stage 2 of the KCC Site Selection Methodology, known as the 'RAG' assessment. The following sites were published as options for consultation with a summary of the results of the Stage 2 RAG assessment:

- site M2 Lydd Quarry Extensions
- site M3 Chapel Farm
- site M7 Central Road
- site M8 West Malling Sandpit
- site M9 The Postern
- site M10 Moat Farm
- site M11 Joyce Green Quarry
- site M12 Postern Meadows
- site M13 Stonecastle Farm Quarry Extension

In November 2017, Kent County Council identified site allocation options following a review of the information obtained through the above consultation on options and gathering of more detailed information

¹ Mineral Sites Plan Options Consultation, Kent County Council, September 2017

on the sites. M9 was no longer being progressed because it was withdrawn by the promoter. Therefore the following options remained as 'reasonable alternatives' to be considered for site allocations:

- site M2 Lydd Quarry Extensions
- site M3 Chapel Farm
- site M7 Central Road
- site M8 West Malling Sandpit
- site M10 Moat Farm
- site M11 Joyce Green Quarry
- site M12 Postern Meadows
- site M13 Stonecastle Farm Quarry Extension

These reasonable alternatives have been subject to SA in this report.

Following detailed technical assessment, review of further submissions to Kent County Council in relation to the sites and the findings of this SA, several of the sites listed as reasonable alternatives have been ruled out as proposed allocations in the Pre-submission MSP. Three sites are proposed for allocation in the Pre-submission MSP. These sites are judged to have acceptable or mitigable impacts following detailed technical assessment, consultation and review of the findings of the SA:

- M3 Chapel Farm

The western part of the site is suitable for allocation in Pre-Submission Draft MSP, subject to meeting development management criteria at planning application stage. The eastern part of the site has been withdrawn by the promoter due to likely unacceptable impact on heritage asset.

- M10 Moat Farm

Suitable for allocation in Pre-Submission Draft MSP, subject to meeting development management criteria at planning application stage.

- M13 Stonecastle Farm Quarry Extension

Suitable for allocation in Pre-Submission Draft MSP, subject to meeting development management criteria at planning application stage.

In addition to site alternatives, it was considered that there was potential to consider an alternative to allocating some or any sites for land-won aggregates in Kent.

With its coastal location, Kent fulfils an important role in the importation of minerals including a range of construction aggregates from mainland Europe, as well as marine dredged aggregates (MDA) and imported recycled and secondary materials. Kent benefits from a number of aggregate wharves, into which significant quantities of MDA and crushed rock are landed. Land-won sharp sand and gravel is also imported by rail and road from areas beyond Kent. Assurances regarding the security of these minerals imports during the Plan period were obtained in developing the KMWLP.

In addition to the land-won maintenance of landbanks to support a steady future supply of aggregate in Kent, the KMWLP contains strategic objectives and policies to

- Promote and encourage the use of recycled and secondary aggregates in place of land-won minerals.
- Safeguard existing, planned and potential sites for mineral infrastructure including wharves and rail depots across Kent to enable the on-going transportation of marine dredged aggregates, crushed rock and other minerals as well as other production facilities.

It is therefore reasonable to assume that an increased supply of secondary and recycled aggregates and MDA is an alternative to the mining of some land-won sharp sand and gravels. It is also reasonable to assume that some land-won aggregates could be imported into Kent from sites outside of Kent. This has therefore been appraised as an alternative to the allocation of sites for sharp sand and gravel. The results of this appraisal are set out in detail in Appendix E and summarised in Section 6.3.

1.10. Methodology

The SA has appraised each of the sites considered as reasonable alternatives, as well as the alternative to allocating some or any land-won aggregate sites in Kent against the appraisal framework set out in Table 1. The SA has also appraised the Kent site selection methodology against this framework. The appraisal was done by assessing each site, other alternative and element of methodology against the appraisal objectives in turn and making a largely qualitative assessment, with reference also to the baseline data from the Scoping Report.

In reporting the results of the appraisal, the following symbols have been used to indicate the broad nature of the predicted effect:

	Symbol
Significant positive effect	++
Some positive effect	+
No effect	0
Some adverse effect	-
Significant adverse effect	--
Uncertain effect	?

Further details on the methodology, including assumptions made, are given in Section 6 of the main report. Information on the difficulties encountered is provided in Section 4 of the main report. These relate to the lack of available data in some instances, and uncertainties about detailed matters of implementation.

1.11. Monitoring Recommendations

The sustainability appraisal has developed a set of recommendations for monitoring the predicted and unforeseen impacts of implementation of the Pre-submission MSP as proposed. These are set out as a series of indicators related to the sustainability appraisal framework based on the likely and possible impacts of the Pre-submission MSP. The recommended indicators should be incorporated into the Annual Monitoring Report for the Local Plan and are set out in Section 7.

2. Introduction

2.1. Background

Amey is commissioned to undertake Sustainability Appraisal (SA) in support of the Kent Minerals and Waste Local Plan (KMWLP) Minerals Sites Plan (MSP) preparation process. This report presents the interim outcomes of this process up to Regulation 19 stage (Pre-submission consultation). SA is a mechanism for considering and communicating the likely effects of a draft plan, and alternatives, with a view to avoiding and mitigating adverse effects and maximising positives.

2.2. The SA Process

It is a legal requirement that SA is undertaken in-line with the procedures prescribed by the Environmental Assessment of Plans and Programmes Regulations 2004, which were prepared in order to transpose into national law the EU Strategic Environmental Assessment (SEA) Directive.

The Regulations require that a report - which for the purposes of SA is known as the 'SA Report' - is published for consultation alongside the Preferred Options Consultation document of the Kent Minerals Sites Plan and then taken into account, alongside consultation responses, when finalising the plan. Essentially, the SA Report must 'identify, describe and evaluate' the likely significant effects of implementing 'the plan, and reasonable alternatives'.

In-line with regulatory requirements, Sustainability Appraisal has already been undertaken throughout the drafting and adoption of Kent's MWLP (most recently: URS, 2013 and Addenda). Kent are currently developing their Minerals Sites Plan: The MSP must be in conformity with the overarching MWLP policies, and will identify sites which meet with the MWLP's requirements and aspirations. The selection of minerals sites has been made from those sites promoted in the call for sites, KCC having employed their own Site Selection Methodology (KCC, 2016) based on best practice, in order to determine which of those submitted for consideration are 'Reasonable Alternatives'. This SA Report has informed the selection of the 'Preferred Options' sites to go forward to the Pre-Submission Draft of the Kent Mineral Sites Plan and the Regulation 19 consultation.

SA has been undertaken of the Site Selection Methodology and Reasonable Alternatives to inform Regulation 19 Pre-submission consultation. The SA of the Kent Minerals Sites Plan will assess both the KCC (2016) methodology, and the sites deemed to be 'Reasonable Alternatives'. A scoping exercise has been undertaken, leading to the production in September 2017 of a Scoping Report which explains the rationale behind the SA Framework selected for this Site Selection Methodology and Reasonable Alternatives SA. This SA Report has been produced in order to address the statutory appraisal questions as detailed in Table 3, to ensure that the sites proposed as 'Preferred Options' have been assessed, any matters of significance noted and mitigation proposed if appropriate.

APPRAISAL QUESTION	CORRESPONDING REQUIREMENT OF THE SEA DIRECTIVE (The report must include...)
1) What is the plan seeking to achieve?	"an outline of the contents, main objectives of the plan or programme and relationship with other relevant plans and programmes" (Annex I(a))
2) What's the sustainability context?	"an outline of the contents, main objectives of the plan or programme and relationship with other relevant plans and programmes" (Annex I(a)) "the environmental protection objectives, established at international, Community or Member State level, which are relevant to the plan or programme and the way those objectives and any environmental considerations have been taken into account during its preparation" (Annex I(e))
3) What's the situation <u>now</u> ?	"the relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan or programme" (Annex I(b)) "the environmental characteristics of areas likely to be significantly affected" (Annex I(c))
4) What would the situation be <u>without</u> the plan?	"the relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan or programme" (Annex I(b))
5) What are the key issues that should be a particular focus of the appraisal?	"any existing environmental problems which are relevant to the plan or programme including, in particular, those relating to any areas of a particular environmental importance, such as areas designated pursuant to Directives 79/409/EEC [Special Protection Areas under the Birds Directive] and 92/43/EEC" (Annex I(d)) (Note impacts on European sites will be specifically addressed through Habitats Regulations Assessment)
6) How has the plan developed up to this point (including the influence of SA)?	"an outline of the reasons for selecting the alternatives dealt with, and a description of how the assessment was undertaken including any difficulties (such as technical deficiencies or lack of know-how) encountered in compiling the required information" (Annex I(h)) "the environmental protection objectives, established at international, Community or Member State level, which are relevant to the plan or programme and the way those objectives and any environmental considerations have been taken into account during its preparation" (Annex I(e))
7) How has the appraisal at this current stage been undertaken?	"an outline of the reasons for selecting the alternatives dealt with, and a description of how the assessment was undertaken including any difficulties (such as technical deficiencies or lack of know-how) encountered in compiling the required information" (Annex I(h))
8) What are the appraisal findings / recommendations at this current stage?	"the likely significant effects (1) on the environment, including on issues such as biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationship between the above factors" (Annex I(f)) "the measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment of implementing the plan or programme" (Annex I(g))
9) How might we monitor the plan's impacts?	"a description of the measures envisaged concerning monitoring..." (Annex I(i))

Table 3 Questions that must be answered (sequentially) within the SA Report

2.3. Compliance with the SEA Directive and Regulations

The MSP is subject to the requirements of the European Union's Directive on the Environmental Assessment of Certain Plans & Programmes 2001/42/EC (the SEA Directive) and the domestic legislation through which the Directive has been transposed into law in England and Wales (the Environmental Assessment of Plans & Programmes Regulations 2004 – Statutory Instrument 2004 No. 1633).

The SA of the MSP was designed and undertaken so as to meet the legal requirements for the environmental assessment of plans. Throughout the report the term 'Sustainability Appraisal' should be interpreted as encompassing the SA process as required under the Planning & Compulsory Purchase Act 2004 and the Strategic Environmental Assessment process as required under the European Directive and domestic Regulations on the environmental assessment of plans and programmes.

The following table indicates the components of the SA Report that make up the Environmental Report, as required by domestic and European law on the environmental assessment of plans.

Requirements for Environmental Report	Component of SA Report
a) An outline of the contents, main objectives of the plan or programme, and relationship with other relevant plans and programmes;	Section 3.1
b) The relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan or programme;	Section 3.3
c) The environmental characteristics of areas likely to be significantly affected;	Section 3.5
d) Any existing environmental problems which are relevant to the plan or programme including, in particular, those relating to any areas of particular environmental importance, such as areas designated pursuant to Directives 79/409/EEC and 92/43/EEC;	Sections 3.3 and 3.6
e) The environmental protection objectives, established at international, Community or national level, which are relevant to the plan or programme and the way those objectives and any environmental considerations have been taken into account during its preparation;	Section 3.2
f) The likely significant effects on the environment, including on issues such as biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationship between the above factors;	Section 6 and Appendices C to E
g) The measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment of implementing the plan or programme;	Appendix D
h) An outline of the reasons for selecting the alternatives dealt with, and a description of how the assessment was undertaken including any difficulties (such as technical deficiencies or lack of know-how) encountered in compiling the required information;	Sections 4 and 5

Requirements for Environmental Report	Component of SA Report
i) a description of measures envisaged concerning monitoring in accordance with Art. 10;	Section 7
j) a non-technical summary of the information provided under the above headings	Section 1

Table 4 Requirements of SEA Directive and Compliance of SA Report

3. The Scope of the Sustainability Appraisal

3.1. What is the plan seeking to achieve?

The MSP is a land use plan produced by Kent County Council which identifies and allocates mineral sites within the county for the working and winning of minerals. The following sites are proposed for allocation:

- M3 Chapel Farm
- M10 Moat Farm
- M13 Stonecastle Farm Quarry Extension

The main objective of the MSP is to ensure that Kent has enough permitted mineral reserves over the plan period (until 2030) and 7 years beyond to meet plan making requirements. Sites M3 is a soft sand site and M10 and M13 are sharp sand and gravel sites.

The Kent Minerals and Waste Local Plan (KMWLP) was adopted in July 2016 and sets out the vision and objectives for Kent's minerals supply and waste management capacity from 2013 to 2030. The KMWLP did not allocate specific sites suitable for minerals and waste development except for two strategic sites - one for cement production (and related mineral reserves) at Holborough in the Medway Valley and one for hazardous waste disposal at Norwood Quarry on the Isle of Sheppey). The KMWLP identified that the specific sites for minerals developments would be set out in the separate MSP which is the subject of this SA Report. The selection of sites will be based on the policies of the KMWLP and sites proposed for development will be required to comply with the policies of the KMWLP.

The KMWLP is a high level document planning to 2030 which:

- sets out the vision and strategy for mineral provision and waste management in Kent;
- contains a number of development management policies for evaluating minerals and waste planning applications;
- considers strategic site provision for all minerals and waste management facilities; and identifies two areas where key (strategic) mineral and waste development should take place. These have been fully assessed previously and therefore are not subject to this SA.

In parallel with the development of the MSP, Kent County Council is also undertaking a Partial Review of the KMWLP. Policies CSW7, CSW8, CSW 12 and CSW 14 of the KMWLP state that a Waste Sites Plan will be prepared that will identify sites suitable for accommodating facilities needed to address the identified capacity shortfalls. A review of the future needs for waste management facilities in Kent has recently been undertaken and this has concluded that there is now no need for the development of this additional capacity. The policies will be amended by the Partial Review to reflect this updated understanding. Policies DM7 and DM8 set out criteria to allow development that may affect safeguarded sites to proceed

in certain prescribed circumstances. Policies DM 7 and DM 8 will be amended by the Partial Review to ensure that the safeguarding is not unduly rigid in its application. The Partial Review has been subject to SA and the results of this are set out in a separate SA Report.

The government has published the National Planning Policy Framework (July 2018), which sets out planning policies for achieving sustainable development. Emphasis has been placed on the importance of ensuring that Local Plan policies contribute to achieving sustainable development. The MSP has been prepared in compliance with the National Planning Policy Framework (NPPF).

The current piece of work is to undertake SA of the draft MSP to inform Regulation 19 consultation on the Pre-submission draft of the MSP, which must be in conformity with the overarching KMWLP. Rather than being a strategy document, the MSP identifies sites which meet with the MWLP’s aspirations, and which can be demonstrated to meet social, economic and environmental criteria. The MSP and associated SA do not replace the statutory need for Environmental Impact Assessment, nor does it remove the need for applicants to apply for detailed planning permission.

3.2. What’s the sustainability context?

URS answered this question in 2013 primarily by reviewing the National Planning Policy Framework (NPPF) and considering the contextual messages established through other plans, policies, strategies and initiatives. Although NPPF (2012) has now been augmented by the publication of various Planning Guidance, the themes of importance largely remain the same. Where a new aspect of context has been identified, this is identified within Table 5 and has been incorporated into the updated Baseline, below. This information was set out in detail in the SA Scoping Report² published in November 2017.

<p>DCLG (2014) Minerals Planning Guidance [https://www.gov.uk/guidance/minerals]</p>	<p>“Minerals operators should look to agree a programme of work with the mineral planning authority which takes into account, as far as is practicable, the potential impacts on the local community and local environment (including wildlife), the proximity to occupied properties, and legitimate operational considerations over the</p>	<p>Check all of these matters form part of the submissions.</p>
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² Scoping Report: Sustainability Appraisal of the Kent Minerals Sites Plan-Making Process, Amey, November 2017

	expected duration of operations”.	
	Water abstraction is additional to issues presented in NPPF.	Added to baseline. Ensure water abstraction is included in assessment.
	Lots of useful operational detail on noise, dust plus flow chart wrt 1km search area and PM2.5 AQO – limit value for PM2.5 came into force 2015.	Added to baseline. Ensure PM2.5 pollution risk is included in assessment.
BSI (2014) BS 5228-1:2009+A1:2014 (Code of practice for Noise control on construction & open sites)	Method of predicting and mitigating noise at open sites.	All relevant for site specific assessments.
BSI (2014) BS 5228-2:2009+A1:2014 (Code of practice for Vibration control on construction & open sites)	Method of predicting and mitigating vibration at open sites.	
BSI (2014) BS 4142: 2014 (Methods for rating and assessing industrial and commercial sound)	Method of determining whether noise from plant and equipment could give rise to residential complaints.	

Table 5 Additional Aspects of Sustainability Context since 2013

Since the publication of the SA Scoping Report in November 2017, the National Planning Policy Framework (NPPF) has been revised and was published in July 2018³. This is the overarching document guiding planning policy in England and as such is important to review to ensure that the SA appraisal framework is consistent with the policy objectives of the NPPF. In 2018, the Government also published a new 25 Year Environment Plan, “A Green Future”⁴. A review has been undertaken and the main policy objectives of the NPPF and “A Green Future” relevant to the MSP are set out in Appendix A. The key conclusions drawn from this review are that the appraisal framework used to assess the MSP should be amended to ensure that the following policy objectives are adequately covered in the framework:

- Recognise the economic and other benefits of the best and most versatile agricultural land;
- Prevent inappropriate development in the Green Belt;

³ National Planning Policy Framework, Ministry of Housing Communities and Local Government, July 2018

⁴ A Green Future: A 25 Year Plan to Improve the Environment, HM Government, 2018

- Protect and enhance public rights of way and access;
- Protect local green space.

3.3. What's the situation now and how would it change without the plan (sustainability 'baseline')?

The following is a summary of the sustainability baseline characteristics described by URS (2013), to set the scene on this further piece of work. Additional items identified during context review are also presented.

Environmental baseline

- Kent is considered to be one the UK's most wildlife-rich counties. This is a result of its varied geology, long coastline, landscape history and southerly location / proximity to mainland Europe.
- Natura 2000 habitat is concentrated around the coast, particularly around the Thames Gateway (much within Medway UA), the Isle of Thanet, the Stour Estuary and Dungeness. Sites of Special Scientific Interest (SSSI) cover 8.5% of the county. The county contains c.10% of England's ancient woodland.
- The Thames Gateway is also acknowledged for its national importance due to 'brownfield' biodiversity.
- The last century has seen major losses and declines of species within Kent. Amongst the most important drivers of biodiversity loss in Kent are: the direct loss of land of value to wildlife to built-development or intensive farming, which has reduced and fragmented populations; and the effects of climate change.
- Analysis at the County level has informed the location of 16 Biodiversity Opportunity Areas (BOAs) across Kent covering 40% of the land area (BOAs cover 35% of the South East).
- Since 2008 there has been a reduction in carbon dioxide emissions of 0.8 tonnes per capita. Nonetheless, this figure remains higher than regional and national emission levels.
- In 2010 it is estimated that 1050 early deaths occurred as a result of just PM2.5 air pollution across Kent & Medway [KMAQM, 2015]
- Kent is considered to be the most at risk local flood authority in England. Flooding has a significant impact on residents and the economy, with such effects predicted to worsen due to climate change.
- In Kent there are many catchments where there is little or no water available for abstraction during dry periods. Pressures are particularly notable in Kent as it is one of the driest parts of England and Wales, coupled with high population density and household water use. Over the next few decades, there will be increasing pressures from the rising population and associated development. Looking further ahead, climate change could have a major impact on the water that will be available for consumption. [EA, 2012]

Social baseline

- Kent had an estimated population of 1,466,500 in mid-2011. By 2021 the population of Kent is projected to increase by 9.4% from 2012. The age group with the greatest projected percentage change in population is 65+ (21.2%).
- In mid-2011, Kent had the largest rural population of any county in the South East (29%) and identified problems of 'rural deprivation', e.g. associated with access to services, facilities and housing affordability.
- In terms of the 'Index of Multiple Deprivation', Kent ranks within England's least deprived third of authorities. However, significant areas within Kent are amongst England's most deprived 20%. Life

expectancy is 8.2 years lower for men and 4.5 years lower for women in the most deprived areas of Kent than in the least deprived areas.

- Early death rates from cancer, heart disease and stroke have fallen and are better than the England average. About 18.4% of Year 6 children are classified as being obese, lower than the average for England. However, estimated levels of adult obesity are worse than the England average.
- Climate change projections highlight an increase in risk to people from flooding; and hotter and sunnier summers leading to public health risks.

Economic baseline

- In 2011, the Gross Domestic Household Income (GDHI) in Kent was £16,855, 5.1% above the UK average, while the South East region was 12.8% above the UK average.
- 2011 was the first year since 2008 that the 'birth' of enterprises in the Kent exceeded the number of 'deaths'.
- During the period October 2011 to September 2012, the employment rate for residents of Kent was 71.1%, a lower figure than that for the South East (74.6%) and close to that for England (70.7%).
- In Kent, the unemployment rate for October 2011 to September 2012 was 7.4% of the population aged 16 years and over; greater than the rate for the South East (5.8%) and close to the rate for England (7.9%).
- The 'public administration, education and health' sector employs the highest proportion of persons aged 16 to 64 (30.7%). Agriculture and fishing employs the lowest proportion of the population aged 16 to 64 (1.6%). These are also the lowest / highest employers at regional and national levels.

How would the baseline would change without the Minerals Sites Plan?

There is a degree of uncertainty about how the baseline might change without the adoption of the MSP. Mineral sites will still come forward for development and these will be required to comply with the development management policies of the KMWLP. This includes policies on the protection and enhancement of: biodiversity value, landscape, Green Belt, heritage assets, the water environment, health and amenity (including air quality) and transportation. Long term trends in environmental quality are likely to continue.

However, without the MSP there will be less certainty that Kent would be able to provide enough minerals to support the expected future demand for minerals from construction and industry. In such an event, there would be a need to source minerals from elsewhere. This may mean importing minerals from other parts of the country, which will have adverse effects on transport networks and air quality. Alternatively, increased quantities may need to be secured from secondary and recycled aggregates and/or marine dredged aggregates. If sufficient minerals of the right type cannot be found, construction and industrial growth may be checked. This could lead to insufficient homes being provided with adverse effects on people and communities. Minerals in Kent would not provide sufficient material to support economic growth, in which case employment levels could reduce and GDP and household incomes may fall.

Emissions of carbon dioxide may be unchanged without the MSP. Mineral sites will still be developed and emissions of carbon dioxide from mineral operations will continue largely the same as at current levels.

However, if imports from other parts of the country are required, this will lead to increased carbon dioxide emissions associated with mineral transport and associated risks to people and communities.

The social baseline is unlikely to be affected without the adoption of the MSP. Population, levels of deprivation and health are unlikely to be significantly different with or without the MSP. Mineral sites will still come forward for development and these must comply with the policies of the KMWLP, including on health and amenity.

3.4. What are the key sustainability issues?

Following review of both context and baseline, the SA Scoping Report set out the key sustainability issues in Kent as follows. Findings of significance from the SA of Kent's MWLP are also presented (see boxes) (both URS, 2013):

Biodiversity

- Ambitious BAP targets have been set, including for habitat creation and for reducing fragmentation and improving connectivity. Landscape scale projects are underway with biodiversity conservation and access to biodiversity as central components.
- It is possible to increase the connectivity between important habitat patches by incorporating habitat creation as part of new development. There is a particular need to maximise the biodiversity benefits associated with restoration of minerals sites.
- Biodiversity benefits relate to the minerals development management strategy, which is set to ensure that negative effects associated with minerals extraction are avoided or mitigated, and the potential for minerals development to contribute to biodiversity objectives is realised.

Climate change

- There is the potential to promote energy from waste as well as other technologies that increase the carbon efficiency of minerals and waste operations.
- Transport is a significant contributor to greenhouse gas emissions that should be addressed through the plan.

Community and well-being

- Clear spatial variation across Kent exists in terms of income, employment and health deprivation.
- Rural deprivation is also a recognised problem, for example for the Isle of Sheppey and the Romney Marsh area.
- Deprivation is focused amongst particular socio-economic groups, for example Gypsies and travellers.
- Community impacts associated with the proximity of quarries and also lorry movements is an issue of strategic importance.
- Traffic on the motorway and A-road network is the cause of the majority of designated Air Quality Management Areas (AQMAs)
- Future development at existing population centres is likely to put further pressure on the road network, and lead to new and worsened occurrences of poor air quality.
- There remain instances where point source air pollution is a strategic issue.

Sustainable economic growth

- There are ambitious plans for economic growth and regeneration, for example in East Kent and the Kent Thames Gateway.
- There are local disparities in economic activity (including problems of 'rurality')
- Economic benefits relate to the targeted measures that are proposed as part of the minerals strategy; in particular, around ensuring supply of materials for strategically important industries / economic activities.

Flood risk

- There is extensive flood risk in Kent, and this situation is set to become worse with climate change.

Land

- There is a need to make best use of previously developed land and avoid the loss of the County's best and most versatile agricultural land. There is also a need to avoid conflict with coastal geomorphology
- 'Land' and 'landscape' benefits relate to the support that is provided for Construction and Demolition (CD) recycling (i.e. aggregate recycling), which reduces the need to extract primary aggregates. There is also a focus on ensuring that the non-recyclable fraction of this inert waste is targeted at quarry restoration projects as a priority. In addition, the MWLP is supportive of efforts to increase the movement of minerals via wharves which should have the effect of encouraging supply of marine dredged aggregates and hence reducing the need for land won aggregates.

Landscape and the historic environment

- There is a need to protect the integrity of the most valued and sensitive landscapes as well as to avoid damage to the landscape character more widely (signs of change inconsistent with countryside character have been identified in several areas).
- Along with a loss of the distinctiveness of the landscape character there has been a noticeable decrease in the tranquillity of landscapes and landscapes that are genuinely 'wild and remote'.
- Specific landscape impacts can be associated with minerals and waste development. Appropriate restoration should be sought to mitigate effects.
- There is a need to take account of designated heritage assets and their settings as well as undesignated assets and wider historic character
- Heritage / historic environment benefits (which are relatively small magnitude and hence of unclear significance) relate to the support that is provided to extraction of minerals for heritage building products with a view to maintaining a diverse supply.
- There remains ongoing debate about the potential for impacts to the AONB, e.g. from silica sand extraction, but the stringency of policy has been strengthened and so effects are now unlikely. There is also some uncertainty around the landscape / biodiversity implications of making provision for both soft sand and sharp sand / gravel landbanks.

Transport

- Much of the primary road network operates at, or above, capacity and there is a shortage of freight paths on the rail network.
- There is a need to adhere to the proximity principle wherever possible.
- There is a need to increase the amount of waste and, in particular, minerals transported by rail or inland waterway.

- Plans are in place to improve the transport infrastructure within and to the Thames Gateway, East Kent and Ashford. The Kent MWDF should recognise and support the aims of regional hubs.
- 'Transport' (and hence also climate change mitigation) benefits relate to the fact that the waste strategy is geared towards ensuring strict adherence to the 'proximity principle', i.e. a situation whereby waste is managed close to the source of production. It is also the case that the minerals strategy includes a focus on the safeguarding of wharves and railheads across the County to enable the on-going importation of marine dredged aggregates, crushed rock and other minerals by sea and rail, rather than by road. No significant negative effects / trade-offs are identified and no recommendations remain outstanding at this current stage.

Water

- Water scarcity is set to become a greater problem in coming as a result of population growth, climate change and the need to comply with the requirements of the Water Framework Directive.
- Groundwater pollution from a range of sources is evident across much of Kent.

3.5. Characteristics of areas likely to be significantly affected

The SEA Directive requires that the appraisal describes the characteristics of areas likely to be significantly affected by the MSP. In deciding which areas are likely to be significantly affected by the MSP, the SA has made reference to the spatial distribution of the proposed minerals sites to determine whether there are any areas of Kent which contain a particular concentration of minerals sites that could give rise to significant effects.

There are two proposed mineral sites in one locality to the east of Tonbridge, on the border of Tonbridge and Malling Borough and Tunbridge Wells Borough. These are sites M10 and M13. There is also an existing site with permission in the same area (Stonecastle Farm Quarry). It could be considered that the locality might be significantly affected by two allocated sites in that area in addition to the already permitted site. However, it is proposed that sites M10 and M13 are worked sequentially with the permitted site so that the extraction rate and HGV movements are no greater than with the existing permission.

More detailed assessment of the impacts arising from each of the sites and cumulatively are provided in Section 6.2 and Appendix D.

3.6. Areas of Particular Environmental Importance

There are five European sites designated under European Directives 79/409/EEC and 92/43/EEC and which are located within a 20km radius of the 8 sites which have been considered as 'reasonable alternatives' for the MSP. These are:

- Dungeness SAC;
- Dungeness, Romney Marsh & Rye Bay SPA & Ramsar site;
- Ashdown Forest SAC and SPA;
- North Downs Woodlands SAC and

- Peter's Pit SAC.

Dungeness SAC

Dungeness is the UK's largest shingle structure and represents the habitat type on the south-east coast of England. The total area of exposed shingle covers some 1,600ha, though the extent of the buried shingle ridges is much greater. Despite considerable disturbance and destruction of the surface shingle, the site retains very large areas of intact parallel ridges with characteristic zonation of vegetation. It still has the most diverse and most extensive examples of stable vegetated shingle in Europe, including the best representation of scrub on shingle. A feature of the site, thought to be unique in the UK, is the small depressions formed within the shingle structure, which support fen and open-water communities. It contains a large number of waterbodies within its 2,000ha. This extensive site hosts a large and viable great crested newt population in a range of natural and anthropogenic habitats. These include natural pools and those resulting from gravel extraction and other activities. Terrestrial habitat of importance for feeding and shelter is provided by a range of open shingle vegetation with scrub in the vicinity of some of the waterbodies.

Dungeness, Romney Marsh and Rye Bay SPA and Ramsar.

The SPA and Ramsar site is located on the south coast of England between Hythe in Kent crossing the county border of East Sussex to Norman's Bay. This is a large area with a diverse coastal and marine landscape comprising a number of habitats, which appear to be unrelated to each other. However, all of them persist because coastal processes have formed and continue to shape a barrier of extensive coastal shingle beaches and sand dunes across an area of intertidal mud and sand flats. The site includes the largest and most diverse area of shingle beach in Britain, with low-lying hollows in the shingle providing nationally important saline lagoons, natural freshwater pits and basin fens. Rivers draining the Weald to the north were diverted by the barrier beaches, creating a sheltered saltmarsh and mudflat environment, which was gradually infilled by sedimentation, and then reclaimed on a piecemeal basis by man. This area is fringed by important intertidal habitats, and contains relict areas of saltmarsh, extensive grazing marshes and reedbeds.

The site also includes a diverse range of broadscale habitats within the marine environment which support a variety of prey species for the foraging seabirds.

Ashdown Forest SAC and SPA

Ashdown Forest is located in the High Weald of East Sussex in south-east England, where valley mires, heath and damp woodland have developed on soils derived from Hastings Sands (Lower Cretaceous). Once a royal hunting forest, reduced grazing has resulted in the accelerated development of woodland and encroachment of bracken over former heath. Nevertheless, some fine examples of heathland habitats remain, with humid or wet heath predominating. Where drier heaths occur they are dominated by heather in association with Gorse and Dwarf Gorse. Streamsides and mires add further variety, with characteristic

plants. The woodlands are also varied, with Birch typically establishing first over heath, followed by Oak, Willow and Pine in places, eventually forming dense and shaded areas with sparse ground flora. Breeding birds of heath, scrub and woodland are associated with the varied mosaic of their respective habitats, distributed over the higher slopes and valleys of the High Weald.

Together with the nearby Wealden Heaths SPA and Thames Basin Heath SPA, Ashdown Forest forms part of a complex of heathlands in southern England that support breeding bird populations of European importance.

North Downs Woodland SAC

This site consists of mature beech forests and yew woods on steep slopes. The stands lie within a mosaic of scrub, other woodland types and areas of unimproved grassland on thin chalk soils. The beech and yew woodland is on thin chalk soils and where the ground flora is not shaded dog's mercury predominates. Associated with it is stinking iris and several very scarce species such as lady orchid and stinking hellebore. The chalk grassland, on warm south-facing slopes, is dominated by upright brome and sheep's-fescue but supports many other plants which are characteristic of unimproved downland, including the nationally rare ground pine.

Peters Pit SAC

Peter's Pit is an old chalk quarry with adjoining soil-stripped fields on the North Downs, with scattered ponds situated amongst grassland, scrub and woodland. The ponds have widely fluctuating water levels and support large breeding populations of great crested newt. The site has an undulating terrain in which many rain fed ponds, of various sizes, have developed. Those which dry up early in the season are of less interest, but five ponds are sufficiently large to support very substantial populations of amphibians, particularly the great crested newt. The value of the site for newts is enhanced by the presence, around the edges and between the ponds, of areas of scrub with loose rock which serve as day and winter refuges. Aquatic vegetation provides shelter in the pond environment.

Habitats Regulations Assessment

Kent County Council have commissioned Amey to undertake a Habitats Regulations Assessment (HRA) of the MSP. The HRA investigates the potential impact of the reasonable alternatives strategic site allocations proposed by the MSP on Natura 2000 sites in the context of the Conservation of Habitats and Species Regulations 2010 (as amended) ('the Habitats Regulations'), which transpose the European Habitats Directive 1992 and Wild Birds Directive 2009 ('the Directives') into English law and hereafter referred to as the 'Habitats Regulations'.

As part of the HRA, a screening exercise has been undertaken to determine which if any of the proposed sites is likely to have a significant effect on any Natura 2000 site. Where a site is deemed not likely to have a significant effect, that site can be screened out from further assessment. Where a site is likely to have a

significant effect, that site must be subject to a further detailed assessment known as Appropriate Assessment.

The HRA screening exercise has determined that site M2 Lydd Quarry Extensions is required to be subject to an Appropriate Assessment. Potential effects could include the disturbance of birds within the SPA/Ramsar and direct loss of habitat if the open fields are used by significant numbers of birds within the SPA/Ramsar. Other potential impacts may include water quality and flow impacts and air quality issues from the workings. However, site M2 Lydd Quarry Extensions is not proposed for allocation in the MSP therefore these potential effects will be avoided.

All other proposed minerals sites have been screened out and do not require Appropriate Assessment.

4. How has the plan developed up to this point?

4.1. Background to the Development of the SA

The process of making the KMWLP commenced in 2009, with SA starting simultaneously and leading to the publication of the MWLP SA Scoping Report (Scott Wilson, 2010). The MWLP SA Scoping Report (Scott Wilson, 2010) included Sustainability Objectives (SO) which had been established during the Scoping process to provide the Framework for the subsequent Sustainability Appraisal. These are presented in Table 6.

Sustainability Objective (SO)	
SO1	Reduce the risk of flooding and the resulting detriment to public wellbeing, the economy and the environment
SO2	Ensure that development will not impact on important elements of the biodiversity resource and where possible contributes to the achievement of the Kent Biodiversity Action Plan and other strategies
SO3	Protect and enhance Kent's countryside and historic environment
SO4	Maintain and improve the water quality of the Kent's rivers, ground waters and coasts, and achieve sustainable water resources management
SO5	Address the causes of climate change through reducing emissions of greenhouse gases through energy efficiency and energy generated from renewable sources
SO6	Reduce and minimise unsustainable transport patterns and facilitate the transport of minerals and waste by the most sustainable modes possible
SO7	Plan for the correct waste management facilities, in the right place at the right time
SO8	Make efficient use of land and avoid sensitive locations
SO9	Support efforts to create and sustain sustainable communities, particularly the improvement of health and well-being
SO10	Support the delivery of housing targets
SO11	Support economic growth and diversification

Table 6 Sustainability Objectives established during SA Scoping (Scott Wilson, 2010)

In 2011, these SOs were used to appraise the options which were at the time presented for Minerals and Waste Sites. This was undertaken on a site-by-site basis (Atkins, 2011). In 2012 a similar process was used to assess the Preferred Options (URS, 2012). By 2014 these SOs had been further developed, and the Consultation Draft of the SA Report (URS, 2013) presented the following Assessment Framework (Tables 7 & 8):

1	Biodiversity
2	Climate change
3	Community and well-being
4	Sustainable economic growth
5	Flood risk
6	Land
7	Landscape and the historic environment
8	Transport
9	Water

Table 7 Sustainability Assessment Framework used in SA Report (Consultation Draft) (URS, 2013)

The KMWLP was adopted in 2016 having been through full Sustainability Appraisal culminating in the SA Report and Addenda (URS, 2013; URS, 2015; AECOM, 2015a and 2015b) and the SA Adoption Statement (AECOM, 2016). Kent County Council (KCC) are now proceeding with their Minerals Sites Plan preparation process. Kent's Site Selection Methodology was published in June 2016.

4.2. The Development of the MSP

A Refresh Call for Sites took place from December 2016 to March 2017, resulting in 38 sites being submitted to KCC for selection assessment, accompanied by a wide range of detailed technical and operational impact data from applicants. For a site to be considered to be a Mineral Site Option it had to:

- Align with the objectives of the adopted KMWLP and scope of the Sites Plan: The KMWLP sets out the minerals supply needs and waste management capacity provision over the period 2013-2030 and the Sites Plan needs to identify sufficient sites to contribute to this requirement.
- Be justified: The site should represent an appropriate option based on a desktop assessment of the opportunities and constraints associated with its location.
- Be deliverable: Development of the site should not result in severe adverse effects that would affect its deliverability, and its development should also be supported by the landowner

A number of sites were ruled out of consideration as reasonable alternatives and therefore were not subject to KCC's Regulation 18 'Minerals Sites Plan Options Consultation'. These are listed below with the reasons why they are not being considered as reasonable alternatives.

- Paradise Farm

Majority of nominated site has recently been granted planning permission for brickearth extraction and the remaining areas would not be viable.

The promoted site has and was the subject of a planning application in 2016 (ref. SW/0277/2016 for 0.885mt of Brickearth to be extracted over 19 years). This was permitted (January 2017) with deletion of two working phases that were adjacent to Newington (phases 16 and 17) and a minor area to the westerly quadrant of the site. This reduced the permitted reserve to 0.75mt to be extracted over 18 years. The un-permitted areas are nominated for allocation in the Minerals Sites Plan. The total reserve in Kent of Brickearth are 0.75mt at Paradise Farm, 0.15 mt at Orchard Farm, an estimated 0.08mt at Hempstead House and Jeffries, Claxfield Road that has an estimated reserve of 0.095mt. Overall the Kent Brickearth reserve is some 1.075mt. Those reserves under the control of the promoter amount to 0.995mt of this and would provide for approximately 23-24 years, almost for the required period of 25 years. The adopted Plan requires sites to be identified for the supply of Brickearth to have reserves of at least 25 years to support the level of actual and proposed

investment of existing plant and equipment. Furthermore, the Bricearth resources that are still being promoted represent areas that are considered too small to be sites in their own right and may be unacceptable for material planning considerations.

- Norwood Quarry (Engineering Clay)

This site is identified in the Minerals Sites Plan though this site is an allocation in the adopted KMWLP. Further supply of clay for engineering purposes has been promoted through the Call for Sites exercise, as an extension to this site. The site promoter wishes to extract 1 million cubic metres of London Clay (at a rate of 50,000 cubic metres per annum) in three phases (1-3). Phase 3 and part of Phase 2 is currently the identified in the KMWLP as the strategic allocation for engineering clay extraction to meet needs for the clay and to create void space for the disposal of residues from EfW processes in Kent. Thus this strategic allocation currently adopted underpins the waste strategy needs of the KMWLP. The promoted site extension has a Phase 1 and the majority of a Phase 2. These areas, together with the adopted strategic allocation, would release significantly more engineering clay material than current need suggests is required. The strategic allocation site is identified as an adequate clay reserve up to 2030 in the adopted KMWLP. The NPPF does not require specific landbanks to be maintained and no justification is forthcoming by the site promoter as to why a significant quantity of further London Clay reserves (in the region of some 1 million cubic metres or 1.826 million tonnes) is justified at this time.

- Richborough Road

A site providing this type of mineral is not required for allocation.

- Wrotham Quarry Extension (Silica Sand)

A site providing this type of mineral is not required for allocation.

Silica sand is a mineral that has national importance due to its limited distribution and its specialist application in industrial processes such as glass manufacture and as a foundry sand amongst others. In Kent the deposit is found in the Folkestone Formation as parts of the geological unit with particular purity. The NPPF states: *Minerals planning authorities should plan for a steady and adequate supply of industrial minerals by:*

providing a stock of permitted reserves to support the level of actual and proposed investment required for new or existing plant and the maintenance and improvement of existing plant and equipment, as follows:

- *at least 10 years for individual silica sand sites;*
- *at least 15 years for cement primary (chalk and limestone) and secondary (clay and shale) materials to maintain an existing plant, and for silica sand sites where significant new capital is required.*

The adopted KMWLP states that the MPA will seek to permit sites to meet the above requirements and that proposals will be considered on their merits having regard to the policies of the Development Plan as a whole, with consideration of the technical matters and the husbanding of the material of high-grade (pure) deposits for industrial end uses. The Plan does not require silica sand sites to be allocated in the Mineral Sites plan and none have been promoted.

- Collarmakers Quarry

Geology includes part the complex Lambeth Group of sands, clays and gravels. The formation has been quarried in the past (Upnor Quarry in Medway where the outcropped is a fine to medium grained clean sand to sandy clay that can be well graded, rounded flint gravel is also present). The promoted site reserve is only estimated (no bore hole data has been supplied) nor is there any supporting technical evidence to demonstrate that the resource in this location is capable of yielding a building sand aggregate.

- Wey Street Quarry

Geology includes part of the complex Lambeth Group of sands, clays and gravels. The formation has been quarried in the past (Upnor Quarry in Medway where the outcropped is a fine to medium grained clean sand to sandy clay that can be well graded, rounded flint gravel is also present). The promoted site reserve is only estimated (no bore hole data has been supplied) nor is there any supporting technical evidence to demonstrate that the resource in this location is capable of yielding a sand and gravel aggregate.

- Hegdale Quarry

The nominated site is an extension to an existing quarry of the same name in the Kent Downs Area of Outstanding Natural Beauty (AONB), a planning application would only be successful if it could be demonstrated that there were exceptional circumstances justifying the extraction of chalk in this sensitive landscape and it was in the public interest. Assessment of the site suggests that exceptional circumstances would not exist and none have been advanced by the site promoter. Moreover the site has an estimated 1.5 cubic million metres of chalk that would yield some 3.75mt of chalk and this reserve alone would last for 58 years at the recorded 2011-14 average sales rate of extraction. The indicated current chalk reserve position in Kent, that is sufficient for the anticipated Plan period, also suggests that there is no need to identify the promoted site in the Minerals Sites Plan at this time. The recorded average per annum sales for the period 2011-14 is 69,955 tonnes. Assuming the same sales per annum for the period 2015-16 (0.14mt in total) the 2014 reserves of 1.50 mt would now be reduced to 1.37mt. Assuming that extraction has remained at a level equivalent to the average of the 2011-14 period (0.07mtpa) the current permitted reserves will be sufficient for 22 years, if sales have been lower, closer to that recorded in 2014 (38,810 tonnes) then the permitted landbank could be sufficient for some 39 years. The Minerals Sites Plan is anticipated to be for the period 2019 to 2030 a time of 11years.

Therefore there are sufficient permitted reserves of engineering and agricultural chalk in the county at this time for the anticipated plan period.

- Richborough Hall

Sites already have benefit of full planning permission for waste treatment activities that give rise to recycled aggregates from the Construction, Demolition and Excavation Waste stream. In this regard the sites are fully operational and contributing to the current supply of recycled aggregates (844,946 tonnes in 2015 or 16.59% of overall supply of aggregates). The sites were promoted as sites that could expand their waste role as waste facilities beyond current activities.

- Richborough Park

Sites already have benefit of full planning permission for waste treatment activities that give rise to recycled aggregates from the Construction, Demolition and Excavation Waste stream. In this regard the sites are fully operational and contributing to the current supply of recycled aggregates (844,946 tonnes in 2015 or 16.59% of overall supply of aggregates). The sites were promoted as sites that could expand their waste role as waste facilities beyond current activities.

In Summer 2017 a Scoping exercise was undertaken by Amey, leading to the publication in November 2017 of a Scoping Report⁵ which developed the context and baseline for this MSP SA, and developed the SA Framework and Objectives to be used in the appraisal (presented in Section 4.1).

Alongside publication of the SA Scoping Report, Kent County Council published a short list of options⁶ for minerals sites being considered as allocations in the MSP. These sites were subject to an initial screening as stage 2 of the KCC Site Selection Methodology, known as the 'RAG' assessment. The following sites were published as options for consultation with a summary of the results of the Stage 2 RAG assessment:

- site M2 Lydd Quarry Extensions
- site M3 Chapel Farm
- site M7 Central Road
- site M8 West Malling Sandpit
- site M9 The Postern
- site M10 Moat Farm

5 Scoping Report: Sustainability Appraisal of the Kent Minerals Sites Plan-Making Process, Amey, November 2017

6 Mineral Sites Plan Options Consultation, Kent County Council, September 2017

- site M11 Joyce Green Quarry
- site M12 Postern Meadows
- site M13 Stonecastle Farm Quarry Extension

Kent County Council identified the preferred site allocation options following a review of the information obtained through the above consultation on options and gathering of more detailed information on the sites. M9 was no longer being progressed because insufficient information has been obtained from the operator to enable a detailed assessment of the site's suitability to be made. Therefore the following options remained as 'reasonable alternatives' to be considered for site allocations:

- site M2 Lydd Quarry Extensions
- site M3 Chapel Farm
- site M7 Central Road
- site M8 West Malling Sandpit
- site M10 Moat Farm
- site M11 Joyce Green Quarry
- site M12 Postern Meadows
- site M13 Stonecastle Farm Quarry Extension

These reasonable alternatives have been subject to SA in this report.

Following detailed technical assessment, review of further submissions to Kent County Council in relation to the sites and the findings of this SA, several of the sites listed as reasonable alternatives have been ruled out as proposed allocations in the Pre-submission MSP. These sites and the reason for rejection are as follows:

- M2 Lydd Quarry Extensions

Likely unacceptable impacts upon the Dungeness, Romney Marsh and Rye Bay Special Protection Area (SPA), the Special Area of Conservation (SAC) and the Ramsar Site; Likely unacceptable impact upon the Dungeness, Romney Marsh and Rye Bay Site of Special Scientific Interest (SSSI). In respect of parcel 23 (Allen's Bank), the likely unacceptable impact upon archaeological interests. It is noted that the impact upon the setting and character of the historic town of Lydd is uncertain.

- M7 Central Road

Likely unacceptable highway impacts on Bob Dunn Way (A206) and on M25 Junction 1a (Dartford Crossing), likely unacceptable loss of biodiversity habitat, impact upon Local Wildlife Sites (LWS) and UK Biodiversity Action Plan (BAP) interests, likely unacceptable impacts on residential amenity, likely unacceptable air quality impact on AQMA and conflict with Local Plan open space objectives.

- M8 West Malling Sandpit

Inconsistent with green belt policy with regard to inappropriate development. An alternative promoted soft sand site at Chapel Farm, Lenham lies outside the Green Belt and is considered acceptable in principle to meet the soft sand mineral requirements in Kent. It is not therefore reasonable to conclude that the necessary 'very special circumstances' exist to override the presumption against inappropriate development within the Green Belt. It is noted that the site is within the setting of the Kent Downs Area of Outstanding Natural Beauty (AONB) and the impacts upon the AONB are uncertain.

- M11 Joyce Green Quarry

Likely unacceptable highway impacts on Bob Dunn Way (A206) and on M25 Junction 1a (Dartford Crossing), likely unacceptable air quality impact on AQMA, likely unacceptable loss of biodiversity habitat, impact upon LWS and UK Biodiversity Action Plan (BAP) interests and uncertainty that restoration proposals would meet ecological objectives to replace habitat. The mineral proposal is considered to be inappropriate development within the Green Belt through restoration proposals and harm arising from highway impacts, air quality and biodiversity impacts.

- M12 Postern Meadows

Insufficient evidence to conclude with any certainty that the development is acceptable in principle for mineral development.

Three sites are proposed for allocation in the Pre-submission MSP. These sites are judged to have acceptable or mitigable impacts following detailed technical assessment, consultation and review of the findings of the SA:

- M3 Chapel Farm

The western part of the site is suitable for allocation in Pre-Submission Draft MSP, subject to meeting development management criteria at planning application stage. The eastern part of the site has been withdrawn by the promoter due to likely unacceptable impact on heritage asset.

- M10 Moat Farm

Suitable for allocation in Pre-Submission Draft MSP, subject to meeting development management criteria at planning application stage.

- M13 Stonecastle Farm Quarry Extension

Suitable for allocation in Pre-Submission Draft MSP, subject to meeting development management criteria at planning application stage.

An outline of the process to date is presented in Figure 1, below. At the time of reporting Step 10 is nearing completion.



Figure 1 Summary of the parallel planning and SA processes

4.3. Difficulties Encountered

A number of difficulties were encountered in undertaking the appraisal:

- **Data.** A common problem affecting SA is the availability and reliability of data. Although data has been collected to illustrate a number of the conditions and trends relevant to the SA of the MSP, some

data sets are more useful than others, and some data sets are known to be old, incomplete or unreliable. In some cases, no data is available. It is therefore almost impossible to quantify effects with total certainty. The SA has relied on technical assessments produced by other organisations, either by the promoter of a site or their agents/consultants or on information provided by consultees including statutory consultees. The sites typically had varying amounts of information available in technical assessments.

- **Uncertainty.** Some of the sites proposed for mineral development are accompanied by proposals for mitigation of some impacts. Until planning applications are submitted and full operational details and an Environmental Statement are provided, it is not possible to be certain how significant the impacts will be and whether impacts can be successfully mitigated. All of the sites that are allocated in the MSP will be required to be compliant with the policies in the KMWLP but it has not been assumed that this will be sufficient to guarantee no adverse impacts. The SA makes recommendations for mitigation of effects, including where this should be addressed within planning applications when sufficient technical detail is available.

5. How has the appraisal at this current stage been undertaken? [Sustainability Appraisal Methodology]

5.1. SA Framework and Sustainability Objectives

Following due diligence in terms of the context and baseline conditions, the Framework and Sustainability Objectives for the SA of the MSP has been developed using that produced by URS (2013). The relationship between the 2010 Scoping and 2013 SA Report objectives is presented in Table 5 below, which also expands on the detail of the objectives and the additions made following the 2017 Scoping exercise and review of the NPPF 2018 and the 25 Year Environment Plan.

Sustainability Objectives (URS, 2013)	Corresponding SO (Scott Wilson, 2010)	Detail – including additions resulting from MPS SA Scoping (Amey, 2017) and additions resulting from review of NPPF and 25YEP
1 Biodiversity	SO2	<p>Ensure that development will not impact on important elements of the biodiversity resource and where possible contributes to the achievement of the Kent BAP and other strategies</p> <ul style="list-style-type: none"> – Add to the biodiversity baseline by creating opportunities for targeted habitat creation (which, ideally, contributes to local or landscape scale habitat networks). – Avoid hindering plans for biodiversity conservation or enhancement – Support increased access to biodiversity
2 Climate change	SO5	<p>Address the causes of climate change through reducing emissions of greenhouse gases through energy efficiency and energy generated from renewable sources</p> <ul style="list-style-type: none"> – Promote sustainable design and construction of facilities and support wider efforts to reduce the carbon footprint of minerals operations.
3 Community and well-being	SO9, SO7	<p>Support efforts to create and sustain sustainable communities, particularly the improvement of health and well-being; and support the delivery of housing targets</p> <ul style="list-style-type: none"> – Help to redress spatial inequalities highlighted by the Index of Multiple deprivation. – Help to tackle more hidden forms of deprivation and exclusion, such as that which is experienced in rural areas and particular socio-economic groups within communities. – Ensure that the necessary aggregates are available for building, and that the necessary waste infrastructure is in place to support housing growth – Ensure that minerals development does not contribute to poor air quality particular reference to PM2.5. – Protect and enhance public rights of way and access

			– Protect local green space
4	Sustainable economic growth	SO11	Support economic growth and diversification – Support the development of a dynamic, diverse and knowledge-based economy that excels in innovation with higher value, lower impact activities – Stimulate economic revival and targeted employment generation in deprived areas
5	Flood risk	SO1	Reduce the risk of flooding and the resulting detriment to public wellbeing, the economy and the environment – Ensure that development does not lead to increased flood risk on or off site – Seek to mitigate or reduce flood risk through developments that are able to slow water flow and promote groundwater recharge
6	Land	SO8	Make efficient use of land and avoid sensitive locations – Make best use of previously developed land – Avoid locations with sensitive geomorphology – Recognise the economic and other benefits of the best and most versatile agricultural land – Prevent inappropriate development in the Green Belt
7	Landscape and the historic environment	SO3	Protect and enhance Kent's countryside and historic environment – Protect the integrity of the AONBs and other particularly valued or sensitive landscapes – Take account of the constraints, opportunities and priorities demonstrated through landscape characterisation assessments and other studies at the landscape scale. – Protect important heritage assets and their settings, as well as take account of the value of the character of the wider historic environment
8	Transport	SO6	Reduce and minimise unsustainable transport patterns and facilitate the transport of minerals and waste by the most sustainable modes possible – Minimise minerals and waste transport movements and journey lengths; and encourage transport by rail and water. – Ensure that minerals and waste transport does not impact on sensitive locations, including locations already experiencing congestion and locations where planned growth or regeneration is reliant on good transport networks.
9	Water	SO4	Maintain and improve the water quality of the Kent's rivers, ground waters and coasts, and achieve sustainable water resources management

			<ul style="list-style-type: none"> – Ensure that minerals and waste development seeks to promote the conservation of water resources wherever possible particular reference to abstraction. – Avoid pollution of ground or surface waters, particularly in areas identified as being at risk or sensitive
Scoped out of URS (2013)	SO10 [waste]		

Table 8 SA Framework

5.2. Applying the Framework

5.2.1 Effects Categories and Assumptions

The SA of sites was undertaken by URS in 2012 for the sites that at the time were deemed to be Preferred Options. Although the outcome of this exercise is no longer relevant due to subsequent changes to the MWLP and different sites being put forward at the refresh call for sites, the Effects Categories (Figure 2) and underpinning assumptions (as amended) (Appendix B) have been used in the current exercise.

	Symbol
Significant positive effect	++
Some positive effect	+
No effect	0
Some adverse effect	-
Significant adverse effect	--
Uncertain effect	?

Figure 2 Effects categories (URS, 2012)

5.2.2 SA of the Site Selection Methodology

Kent’s Site Selection Methodology was published in June 2016 and is comprehensively detailed in the MSP Scoping Report (Amey, 2017). In brief, it has four stages as follows – of which Stages 1 and 2 have been undertaken to date [and of which SA forms part of Stage 3]:

- Stage 1 - Alignment with Scope of Sites Plan
- Stage 2 - Initial Screening – RAG rating to define the 'Reasonable Alternatives' (Appendix B).
- Stage 3 - Detailed Technical Assessment to demonstrate sites’ potential as possible 'Preferred Options' for allocation in the Minerals Sites Plan. For the Preferred Options Consultation stage of the Kent Minerals Sites Plan technical assessment is more limited to an understanding of the main constraints

and how they can be mitigated to enable any promoted site to be identified as a Preferred Option for Regulation 197 consultation purposes.

- Stage 4 – Identification of Preferred Site Options.

Following Preferred Options consultation (Regulation 18), the County Council has identified those sites that should be considered as potential allocations in the Minerals Sites Plan.

The KCC Site Selection Methodology (June 2016) has not yet been subject to Sustainability Appraisal as it was produced after the adoption of the KCC Local Minerals and Waste Plan (which was last modified May 2016). The methodology – in terms of the information sought and its method of RAG assessment – has therefore been subject to assessment using the SA framework developed by URS in their 2013 SA Report (see Appendix B), and with reference to the assumptions underlying the approach adopted by URS as part of the 2012 assessment of Preferred Options and which was subject to SA at that time. These assumptions have been amended to reflect the findings of the review of the NPPF 2018.

An assessment matrix has been drafted and is presented in Appendix C.

5.2.3 SA of the Minerals Sites

The SA is required to undertake an appraisal of the 'reasonable alternatives' for the MSP. Each of the eight sites which were carried forward as potential allocations have therefore been assessed as a reasonable alternative for the MSP. Each of these sites has therefore been subject to assessment using the SA framework developed by URS in their 2013 SA Report as amended (see table 8). An assessment matrix has been drafted and is presented in Appendix D.

As discussed in Section 3.2; it has been assumed that the baseline conditions within Kent remain unchanged from those detailed within the URS Sustainability Appraisal and Addenda published to date.

It can be seen by reviewing the URS 2012 underpinning assumptions that these are an assessment of the proximity of a proposed site to sensitive receptors or environmental constraints. At this stage in the process of the development of the MSP, a considerable amount of detailed technical information is now available about the nature of operations at the sites, such as hours of operation, vehicle movements and environmental constraints. A number of site-specific technical assessments have also been undertaken, including assessments of impacts on transport, landscape and visual, ecology, archaeology, green belt, hydrology and others. It is essential that the SA takes account of this detailed information in drawing conclusions about the likely impacts of developments at the proposed sites.

Because of this, the URS 2012 underpinning assumptions have been used as a starting point to understand the proximity of the sites to constraints/opportunities. These underpinning assumptions have been

7 The Town and Country Planning (Local Planning) (England) Regulations 2012

supplemented by the available technical information to make a more accurate assessment of the likelihood and significance of any impacts rather than simply the proximity of a site to constraints/opportunities.

The appraisal of sites has considered a range of different types of effects as required by Annex I of the SEA Directive, namely: secondary effects; effects in the short, medium and long term; whether effects are permanent or temporary; and positive and negative effects. The type of effects identified are indicated in the tables in Appendix D.

Effects are identified in the short, medium and long term. To make this assessment, the short term has been chosen as being within the first 5 years of adoption of the MSP, the medium term is considered to be the operational life of the site and the long term is after the site has been restored.

An assessment has also been made of the probability of the identified effect occurring (low, medium or high), whether the effect is direct or indirect, and whether the effect is temporary or permanent indicated by whether or not the effect could be reversed.

Cumulative and synergistic effects are discussed in Section 6.4.

In order to determine the significance of effects, the appraisal has followed the criteria for determining significance as set out in Annex II of the SEA Directive.

Sites which come forward for development under the MSP will be required to comply with policies in the KMWLP. These include development management policies in the KMWLP to manage and mitigate the impacts of development. For several of the sites, but not all sites, the promoters have proposed mitigation measures to address likely impacts that have already been identified. In undertaking the appraisal, it has been assumed that any mitigation that has already been proposed will be implemented to address the potential impacts of development. It is also assumed that if no mitigation has been proposed then the potential effects are unmitigated at this stage. In order to comply with development management policies in the KMWLP, it is expected that sites will be required to provide mitigation where necessary or desirable, but no assumptions have been made as to what that mitigation would be and whether it would be sufficient to address impacts.

The appraisal has assessed the likely effects arising from development at each of the sites. Where appropriate, the appraisal has made recommendations for mitigation which is necessary or desirable to address the predicted effects of development. These recommendations are set out in the tables in Appendix D.

5.2.4 SA of Alternatives to Land-Won Aggregates

With its coastal location, Kent fulfils an important role in the importation of minerals including a range of construction aggregates from mainland Europe, as well as marine dredged aggregates (MDA) and imported recycled and secondary materials. Kent benefits from a number of aggregate wharves, into which significant quantities of MDA and crushed rock are landed, 1.7 million tonnes (mt) being imported into its wharves in

2013 and of the total of 3.13mt of MDA landed in Kent and Medway in 2009 (1.41mt into Kent), 2.5mt was consumed within Kent and Medway. Land-won sharp sand and gravel is also imported by rail and road from areas beyond Kent. Assurances regarding the security of these minerals imports during the Plan period were obtained in developing the KMWLP.

In addition to the land-won maintenance of landbanks to support a steady future supply of aggregate in Kent, policy CSM 8 of the adopted Kent Minerals and Waste Local Plan 2013-30 states that sites will be identified in a Minerals Sites Plan to produce recycled and secondary aggregates to ensure a processing capacity of at least 2.7 million tonnes to maximise the availability of alternatives to marine-won and local land-won sand and gravel extraction. Current capacity of production in this sector is some 3.45 million tonnes per annum. Additional sites were therefore not needed at the time of development of the KMWLP to meet the Plan's requirements.

The KMWLP contains strategic objectives to

- Promote and encourage the use of recycled and secondary aggregates in place of land-won minerals.
- Safeguard existing, planned and potential sites for mineral infrastructure including wharves and rail depots across Kent to enable the on-going transportation of marine dredged aggregates, crushed rock and other minerals as well as other production facilities.

The KMWLP also contains policy to support the increased use of secondary and recycled aggregates and wharves and rail depots:

- Policy CSM seeks to maintain and increase production capacity of secondary and recycled aggregates;
- Policy CSM 6 seeks to prevent non-minerals development that may unacceptably adversely affect the operation of existing, planned or potential safeguarded wharves and rail depots, such that their capacity or viability for minerals transportation purposes may be compromised.

The most recent Local Aggregates Assessment⁸ reports that with regard to recycled and secondary aggregates and wharves there is significant available headroom. In 2016 it is shown that there was a spare capacity of 73% for managing recycled and secondary aggregate and 75% spare capacity for managing mineral at wharves. There is potential to provide almost an additional 2.8 million tonnes of secondary and recycled aggregates over the current demand of 1.03 million tonnes if more CD&E waste becomes available to contribute to aggregate supply needs. The rail depots would appear to have less capacity headroom, though sufficient capacity to cope with an increase to ensure an adequate and steady supply of aggregate.

Importation of aggregates in the form of largely marine dredged sands and gravels and crushed rock continue to be very significant in overall supply terms, accounting for 3.55 million tonnes of the total 6.14

⁸ Local Aggregates Assessment 2017, Kent County Council, May 2018

million tonnes produced overall in Kent in 2016. This accounts for almost 58% of total supply. In both cases the last three year sales averages are greater than the last 10 year sales average for imported crushed rock and marine dredged aggregates which clearly indicates that importation is becoming more important than the land-won alternatives in overall supply terms. Soft sand is not generally supplied from marine won sources and so remains essentially a Kent land-won resource that is not being supplanted in the supply chain by imports to any great extent. The wharves in Kent are operating at 25% of their available capacity and, while this appears low, the Local Aggregates Assessment reports that as the land-won reserves of sharp sands and gravels are depleted the need for marine dredged sands and gravels to meet identifiable and objectively assessed needs will increase.

The 2017 LAA reports the Crown Estate as stating in 2012 that "The marine aggregate resource available in the East Coast, Thames Estuary and East English Channel areas and which are used to supply Kent wharves is 994 million tonnes of which 31.25 million tonnes is permitted for extraction per annum. Kent wharves only received some 1.3 million tonnes (4.2% of total permitted per annum) in 2010, but increased in 2011 with 1.55 million tonnes (5%). There is therefore a long term viable and sustainable supply of marine dredged aggregate both for construction uses and for direct beach nourishment by vessel delivery."

It is therefore reasonable to assume that an increased supply of secondary and recycled aggregates and MDA is an alternative to the mining of some land-won sharp sand and gravels. It is also reasonable to assume that some land-won aggregates could be imported into Kent from sites outside of Kent. This has therefore been appraised as an alternative to the allocation of sites for sharp sand and gravel. The results of this appraisal are set out in detail in Appendix E and summarised in Section 6.3.

The same is not true for soft sands. Artificial 'soft sands' have not been developed (if technically possible) and soft sands as imports are relatively marginal in the overall supply chain. It is clear that an alternative to the land-won soft sands, that will provide a steady and adequate supply as required by the National Planning Policy Framework, is unavailable at this time. Neighbouring authorities support the allocation of sites suitable for the development of soft sand on the basis that this would help address a wider issue that the vast majority of soft sand in the unconstrained south east is being progressively exhausted, and much of what remains is constrained by designations such as AONBs or National Parks (such as the South Downs).

6. Sustainability Appraisal Findings and Recommendations

6.1. SA of the Site Selection Methodology

The KCC Site Selection Methodology (June 2016) has not previously been subject to Sustainability Appraisal. The SA Scoping Report proposed that the methodology – in terms of the information sought and its method of RAG assessment – would be subject to Sustainability Appraisal using the SA framework and objectives developed as part of the Scoping Report. The KCC Site Selection Methodology RAG assessment has therefore been subject to assessment using the SA framework as amended. The detailed results of this assessment are set out in Appendix C and the findings and conclusions are summarised in Table 9.

KCC RAG Opportunity/Constraint	Implications for SA Sustainability Objectives
Landscape	The KCC approach corresponds with the scope of the SA Sustainability Objective in landscape terms.
Nature conservation and geodiversity interests	Assessment methodologies are compatible in looking at impacts on biodiversity. The SA Sustainability Objectives are more comprehensive in looking at access to biodiversity which can be provided in restoration plans.
Historic environment	Assessments are compatible.
Water environment including flooding	The methodologies are compatible on flood risk management and impacts on water quality and resources.
Air quality	Air quality is considered by both approaches in terms of acceptability and impacts on health and wellbeing. The SA Sustainability Objective explicitly looks at the impacts on climate change while the RAG methodology does not, although there will be limited scope for mineral sites to ameliorate impacts.
Soil quality	The KCC approach makes reference to agricultural land classification, however the SA approach does not. This has been added into the SA appraisal objectives to ensure that this aspect is included in the appraisal.
Public Rights of Way (PRoW)	The SA Sustainability objectives consider sustainable communities including in relation to health and wellbeing. The appraisal has considered the impact on PRoWs as a component of this.
Transport (including proximity, access and impacts)	The methodologies are compatible in terms of access and impacts, but the SA is more comprehensive in considering sustainable transport and minimising the need for transport. This is indirectly linked to climate change and air quality impacts as well as network impacts.

Services and utilities	Services and utilities need to be accessible and connections maintained, but this was not considered significant for the SA Sustainability Objectives.
Health and amenity	Approaches appear to be comparable.
Cumulative impacts	The SA does not include cumulative effects within the SA Sustainability Objectives but it is a required part of the appraisal.
Airport safeguarding	The SA does not explicitly consider Airport Safeguarding.
Green Belt (for sites in the Green Belt the 'very special circumstances' test will be applied)	The consideration of impacts on green belt has been added to the SA Sustainability Objectives.

Table 9: Summary of Findings of SA of KCC Site Selection Methodology

Following this assessment, amendments to the SA Sustainability Objectives have been made as described in the above table and the SA of sites which constitute reasonable alternatives have been assessed against this revised framework.

6.2. SA of the Sites

The SA has appraised each of the sites which are considered to be reasonable alternatives for the MSP. The methodology and assumptions used in undertaking the appraisal are set out in Section 5.

The detailed findings of the SA of sites are set out in Appendix D. Where appropriate, for each individual site and each effect identified, mitigation is recommended to address the effects and where possible avoid or minimise potential adverse effects. The findings of the SA of sites are summarised in Table 10 and discussed below.

Site	Sustainability Objective								
	1 Biodiversity	2 Climate change	3 Community and wellbeing	4 Sustainable economic growth	5 Flood risk	6 Land	7 Landscape and the historic	8 Transport	9 Water
M2 Lydd Quarry Extensions	--	?	-	++/-	?	-/?	0/?	?	-
M3 Chapel Farm	-	-	-	++/-	0	-	-/?	?	-
M7 Central Road	--	-	-	++/-	?	-	?	--	-
M8 West Malling Sandpit	--	-	-	++/-	?	-/?	-/?	?	-
M10 Moat Farm	?/-	0	-	++/-	?	?	-/?	0	-
M11 Joyce Green Quarry	--	-	-	++/-	?	?	?	--	--
M12 Postern Meadows	-/+	-	-	++/-	?	?	-/?	-	-
M13 Stonecastle Farm Quarry	-/+	0	0	++/-	?	0/?	?	0	-/?

Table 10: Summary of Findings of SA of Sites

Discussion

The aspect of the Minerals Sites Plan where there is the most potential to give rise to negative impacts is on biodiversity. All of the sites contain or are adjacent to some form of biodiversity asset or biodiversity value and in some cases the impacts are likely to be significantly adverse, notably for the Lydd Quarry extensions and the two sites in the Dartford Marshes. It will be important for all planning applications to fully assess the impacts on biodiversity, to provide mitigation where possible and where this is not possible to provide replacement habitat of equal value. Some restoration proposals aim to restore the site to biodiversity habitat, but it is not clear in all cases that this can be achieved to a satisfactory degree.

The Minerals Sites Plan is likely to increase emissions of greenhouse gases overall by generating additional HGV movements and increasing the energy requirements for mineral processing on site. However, these are insignificant when considered in the context of emissions from the county as a whole.

Some negative impacts are possible on community wellbeing, mainly due to the potential for negative impacts on residential amenity from operations and transport, and also on the diversion or removal of footpaths. In most cases it should be possible for mitigation to adequately minimise impacts from dust, noise, vibration, light and visual impacts, although in some cases adverse effects could not be mitigated and are still likely, although cumulative impacts are not likely to be significant.

The Minerals Sites Plan will help to contribute to economic growth by providing a supply of minerals to support construction and potentially other economic sectors that depend on aggregates. By facilitating the extraction of primary aggregates, the Minerals Sites Plan is exploiting a non-renewable resource, which cannot be considered sustainable.

Some of the minerals sites lie within Flood Zone 3. In these cases, it must be demonstrated that development can take place without adversely affecting flood risk and where possible contributing to a reduction in overall flood risk.

Some of the minerals sites contain soils which are classed as the best and most versatile agricultural land. In some cases this soil will be lost as restoration is to wetland/open water. If the restoration is to agricultural land, this should be to at least the grade of soil removed, and where possible the same soil should be retained for reuse. In one case, development of the site will result in the removal of a geomorphological SSSI. Some of the sites lie within the Metropolitan Green Belt, in which case it must be demonstrated that operations will not constitute inappropriate development or constitute very special circumstances. Given that sites will be restored to agricultural or wetland habitat, lasting cumulative impacts on the Green Belt are not envisaged.

There is the potential for several of the sites to have impacts on landscape and on the historic environment. However, it will be possible to provide mitigation such that the significance of impacts is minimised. Adverse impacts on the AONBs are not likely to be significant.

Minerals sites generate vehicle movements accessing and leaving the sites. The majority of these are HGV movements and it is estimated that these will range between 3 movements per hour to 9 movements per hour depending on the site. In addition, staff vehicles will access the sites, ranging from an estimated 6 to 12 movements per day. For sites M10 and M13, operations are planned to run sequentially with existing extraction in the locality so that the impacts from vehicles are likely to be no greater than existing impacts. It is possible for cumulative impacts from transport to occur from more than one minerals site, in the case of M7 which would act cumulatively with site M11, and in the case of M12 which would act cumulatively with sites M10 and M13. However, the scale of the cumulative impact of the MSP overall is not expected to be great given the predicted number of movements and the context of all traffic movements in the county. The area with potentially the most significant constraint is for sites M7 and M11 in the context of congestion on the M25 and local roads. These sites must be able to demonstrate the road network is able to accommodate site traffic without adverse impacts on congestion and air quality. It is unlikely that the Minerals Sites Plan will support the use of sustainable modes of transport for minerals.

Some of the minerals sites have the potential for significant impacts on hydrology/hydrogeology and water quality. In some cases operation and/or restoration to wetland could affect local hydrology. However, the cumulative impacts from all sites in the Minerals Sites Plan is not expected to be significant for the county as a whole.

Overall Impacts of MSP

Partly as a result of the above findings of the SA of sites, some of the sites are not proposed for allocation in the Pre-submission MSP. The sites that are proposed for allocation are M3 Chapel Farm (western part only), M10 Moat Farm and M13 Stonecastle Farm Quarry Extension. The following table summarises the conclusions about the impact of the MSP overall with these three sites proposed for allocation.

Site	Sustainability Objective								
	1 Biodiversity	2 Climate change	3 Community and wellbeing	4 Sustainable economic growth	5 Flood risk	6 Land	7 Landscape and the historic environment	8 Transport	9 Water
M3 Chapel Farm	-	-	-	++/-	0	-	-/?	?	-
M10 Moat Farm	?/-	0	-	++/-	?	?	-/?	0	-
M13 Stonecastle Farm Quarry	-/+	0	0	++/-	?	0/?	?	0	-/?
Overall impacts	-	-	-	++/-	?	?	-/?	?	-/?

Table 11: Summary of Findings of SA of MSP Overall

Each of the sites contain or are adjacent to some form of biodiversity asset or biodiversity value and impacts are possible in each case. It will be important for planning applications to fully assess the impacts on biodiversity, to provide mitigation where possible and where this is not possible to provide replacement habitat of equal value. Restoration proposals at two of the sites aim to restore the site to biodiversity habitat which will help to mitigate any potential loss.

The Minerals Sites Plan is likely to increase emissions of greenhouse gases overall by generating additional HGV movements and increasing the energy requirements for mineral processing on site. However, these are insignificant when considered in the context of emissions from the county as a whole.

Some negative impacts are possible on community wellbeing, mainly due to the potential for negative impacts on residential amenity from operations and transport, and also on the diversion or removal of footpaths. It should be possible for mitigation to adequately minimise impacts from dust, noise, vibration, light and visual impacts, although cumulative impacts are not likely to be significant.

The Minerals Sites Plan will help to contribute to economic growth by providing a supply of minerals to support construction and potentially other economic sectors that depend on aggregates. By facilitating the extraction of primary aggregates, the Minerals Sites Plan is exploiting a non-renewable resource, which cannot be considered sustainable.

Two of the minerals sites lie within Flood Zone 3. In these cases, it must be demonstrated that

development can take place without adversely affecting flood risk and where possible contributing to a reduction in overall flood risk.

One of the minerals sites contains soil which is classed as the best and most versatile agricultural land, although restoration to agricultural land is proposed and therefore the impact of the MSP on soil quality is not likely to be significant. Two of the sites lie within the Metropolitan Green Belt, in which case it must be demonstrated that operations will not constitute inappropriate development or constitute very special circumstances. Given that sites will be restored to wetland habitat, lasting cumulative impacts on the Green Belt are not envisaged.

There is the potential for the sites to have limited impacts on landscape and on the historic environment. However, it will be possible to provide mitigation such that the significance of impacts is minimised. Adverse impacts on the AONBs are not likely to be significant.

Minerals sites generate vehicle movements accessing and leaving the sites. The majority of these are HGV movements and it is estimated that these will range between 4 movements per hour to 8 movements per hour depending on the site. In addition, staff vehicles will access the sites, around an estimated 10 movements per day. For sites M10 and M13, operations are planned to run sequentially with existing extraction in the locality so that the impacts from vehicles are likely to be no greater than existing impacts. The scale of the cumulative impact of the MSP overall is not expected to be great given the predicted number of movements and the context of all traffic movements in the county. It is unlikely that the Minerals Sites Plan will support the use of sustainable modes of transport for minerals, although the KMWLP safeguards railheads and wharves to support rail and water transport of minerals.

Each of the minerals sites have the potential for significant impacts on hydrology/hydrogeology and water quality. Restoration to wetland could affect local hydrology. However, the cumulative impacts from all sites in the Minerals Sites Plan is not expected to be significant for the county as a whole.

6.3. SA of the Alternatives to Land-Won Sand and Gravel

In addition to the site options of the MSP, the SA has identified that there is an alternative to the allocation of sites for extraction of land-won aggregates and that is the increased supply of secondary and recycled aggregates, marine-dredged aggregates and import of land-won aggregates from outside of Kent. The detailed findings of the SA of this alternative are presented in Appendix E and summarised below.

The increased supply of marine-dredged aggregates (MDA), secondary and recycled aggregates and land-won aggregates from outside Kent will help to reduce the potential negative impacts associated with proposed site allocations. These include negative impacts on biodiversity, water quantity and quality, landscape, the historic environment, agricultural land, Green Belt and flood risk which are associated with some of the sites. Some of these negative impacts from some land-won aggregate sites are still likely as sites are still likely to be needed to meet requirements. The scale of the benefits will depend on which sites are replaced by the supply of alternatives which is unknown.

Opportunities for habitat improvement and improved access through restoration will be lost, although the loss of this benefit is unlikely to be significant. There may be biodiversity impacts associated with transport of alternative aggregates through noise, disturbance and effects on air quality, but this is unlikely to be significantly different from that associated with land-won aggregates. MDA may have adverse effects on marine biodiversity, but the likelihood and significance of any effects is unknown.

The increased supply of secondary and recycled aggregates and MDA will contribute to ensuring the supply of aggregates to support construction to the benefit of current and future communities and to support economic growth. The use of secondary and recycled aggregates avoids the use of non-renewable resources and therefore constitutes a more sustainable route to growth. The use of MDA is a non-renewable resource and is not a sustainable route to growth.

There may be some scope to transport aggregates from safeguarded wharves by rail and recycled aggregates from safeguarded rail depots. This will help to promote the transport of materials by more sustainable modes than road transport. It will also help to reduce the potential for adverse impacts on air quality from road transport, although the scale and significance of this will depend on which land-won sites would be replaced by alternative aggregate supply and whether this will avoid areas of poor air quality. This is unknown at this stage. The likely proportion of either MDA or recycled aggregates transported by rail is unknown and therefore the significance of any benefits is also unknown. Any imports of land-won aggregates from outside of Kent are likely to be by bulk transfer to be economic, and therefore most likely to be transported by rail or through wharves, enabling a more sustainable mode of transport to be used than road. The climate change effects of this bulk transport are uncertain as this will depend on the distance the material has travelled which is not known. Railheads and wharves are safeguarded in the KMWLP to support bulk transfer of minerals.

There will be climate change impacts associated with the energy requirements for processing and transport of secondary and recycled aggregates and MDA and land-won aggregates from outside of Kent after these are deposited at railheads or wharves, although these impacts are not likely to be significantly different from the processing and transport of land-won aggregates from Kent.

6.4. Cumulative Effects and Inter-Relationship Between Effects

Cumulative Effects

The SEA Directive requires assessment of an additional level of impacts in addition to straightforward direct impacts. These are specified as "secondary, cumulative, synergistic, short, medium and long-term permanent and temporary, positive and negative". The following approach has been taken to identifying such impacts.

A number of different types of impact are set out in European Commission guidance:

- separate developments causing the same impact – cumulative;

- different impacts acting together on a receptor e.g. air pollution and land take – cumulative;
- plan impacts which give rise to other indirect impacts – secondary; and
- different impacts which together give rise to yet another impact – cumulative and secondary.

There is therefore a need to consider both secondary and cumulative impacts in the appraisal. Secondary impacts were considered as an integral part of the main appraisal work, and this is indicated in the appraisal matrices in Annexes D and E where impacts are either direct or indirect i.e. secondary. Certain other attributes are common to all types of impact: these are timescales (i.e. short, medium and long-term impacts), reversibility (i.e. permanent or temporary impacts) and whether the impacts are positive or negative. These attributes were also all considered as integral aspects of impact assessment, and this is similarly indicated in the appraisal matrices in Annexes D and E. Cumulative impacts are discussed in this section of the SA Report.

There are two types of situation that could give rise to cumulative impacts:

- the same effect arising from two or more different sources; and
- different effects where there is a relationship between the effects and potentially an interaction.

Synergistic effects are a type of cumulative impact. These are effects where the cumulative impact may be greater or smaller than the sum of the separate effects. Cumulative impacts were considered in the appraisal in two ways:

- the potential for different developments to give rise to the same type of effect; and
- the potential for interaction between different types of effect.

In order to assess the cumulative impacts arising from all potential developments under the Minerals Sites Plan, the appraisal considered the overall effect of the Plan as a whole on each of the SA objectives. The results of this are summarised in tables 10 and 11 and discussed in section 6.2.

Cumulative Impacts in Combination with Other Plans and Strategies

The appraisal has considered the potential for effects arising from other plans and strategies which, in combination with effects arising from the Minerals Sites Plan, may give rise to significant impacts. The results of the review of other plans and strategies and their potential to give rise to cumulative effects is set out below.

The following key plans/programmes have been identified that could give rise to significant cumulative impacts together with the Minerals Sites Plan:

- Shepway Core Strategy Local Plan, Shepway District Council, September 2013;

- Council Core Strategy Review, Consultation Draft Plan, Shepway District Council, March 2018;
- Maidstone Borough Local Plan, Maidstone Borough Council, October 2017;
- Submission Local Plan 2030, Ashford Borough Council, December 2017;
- Local Plan Regulation 19 Pre-submission Publication, Tonbridge and Malling Borough Council, September 2018;
- Site Allocations Local Plan, Tunbridge Wells Borough Council, July 2016;
- Core Strategy DPD, Tunbridge Wells Borough Council, June 2010;
- Dartford Core Strategy, Dartford Borough Council, September 2011;
- Bexley Core Strategy, London Borough of Bexley, February 2012;
- Bexley Growth Strategy, December 2017;
- Core Strategy and Policies for Management of Development (as amended), Thurrock Council, January 2015;
- Local Transport Plan 4: Delivering Growth Without Gridlock 2016-2031, Kent County Council;
- Waste and Minerals Plan for East Sussex, South Downs and Brighton & Hove, February 2013;
- Waste and Minerals Sites Plan, East Sussex County Council, February 2017;
- Core Strategy, Rother District Council, September 2014;
- Local Transport Plan 3 2011-2026, East Sussex County Council, June 2011;
- New London Plan – Consultation Draft, London Assembly, December 2017;
- Minerals and Waste Local Plan 2013-30, Kent County Council, July 2016;
- Regulation 19 Consultation: Partial Review of the Kent Minerals and Waste Local Plan 2013-30, Kent County Council, December 2017.

The relevant sections of each of these with the potential to give rise to cumulative effects is summarised in Appendix F, noting the relevant minerals sites affected. An assessment has been made of the potential contribution to significant cumulative effects in combination with the Minerals Sites Plan and this is discussed below.

The main area where there is the potential for cumulative effects to arise in combination with the Minerals Sites Plan is in relation to impacts on the road network and in some cases also on air quality. All minerals sites are near to areas proposed for housing and economic growth, in some cases significant levels of

growth. The growth provided for in plans and strategies will give rise to additional demands for access to road space. In most cases, plans are also in place for measures to manage this demand, including through infrastructure improvements and promotion of more sustainable modes of transport, although the degree to which such measures will offset the increased demand is uncertain. In all cases, it is likely that the demand for access to the road network from planned housing and economic growth will be significantly greater than the demand from minerals developments.

There is synergy between the MSP and local plans and strategies, in that all local plans provide for significant amounts of housing and employment growth and this will be assisted by the MSP ensuring that there are sufficient available reserves of the minerals required by the construction sector and for other economic uses.

There are likely to be cumulative pressures on biodiversity due to the development of some greenfield sites for housing and economic uses and the loss of sites of biodiversity value to minerals developments, but it is uncertain what the scale of these cumulative impacts will be and what their significance is.

Interrelationship Between Effects

The SEA Directive requires the appraisal to consider the interrelationship between the significant effects of the Minerals Sites Plan. This has been done as an integral part of the appraisal of the sites and options, and examples of this can be found throughout Section 6 and Annexes C to E of this report. The main interrelationships found through the appraisal are highlighted below.

Impacts on biodiversity can arise through habitat loss, disturbance from noise and human activity, changes to the water environment, reductions in air quality and deposition of dust and other pollutants. These impacts have the potential to act in synergy with each other such that multiple pressures have a greater total impact than the sum of individual impacts. These impacts also have the potential to negatively affect human amenity, along with visual impacts.

Preservation, replacement and enhancement of green spaces and connectivity will be of benefit to biodiversity by ensuring connectivity and protection and enhancement of green and blue infrastructure. It will also benefit human health and quality of life, encouraging active lifestyles and helping to promote sustainable travel by encouraging people to walk or cycle rather than using the car. It can also help to support biodiversity protection and improvement. This will also help to protect landscape quality and help to promote the wellbeing of communities.

Protection of historic features and assets will contribute to maintaining landscape quality in Kent, contributing to preserving its distinctive quality and supporting tourism and the visitor economy.

Changes in air quality can have significant consequences for human health and biodiversity, while improvements in air quality arising from more sustainable transport patterns will benefit human health and vulnerable species and ecosystems. Changes in water quality also have the potential to significantly affect

species and ecosystems, as well as having economic impacts resulting from changes to the availability or quality of water supply.

Flood risk reduction will help to protect and enhance water quality. It will also have economic benefits by protecting homes and businesses from having to deal with the financial consequences of flooding.

7. How might we monitor the plan's impacts?

As required by the SEA Directive, a number of recommendations are made for indicators to monitor the likely significant impacts of the Local Plan. These are set out in Table 12 corresponding to the relevant impacts identified and summarised in the preceding chapters of this report.

One of the aims of monitoring as specified by the SEA Directive is to identify unforeseen adverse effects in order to be able to take appropriate remedial action. To enable this to be done, recommendations are also made in Table 12 for monitoring potential sustainability impacts that are not expected to occur as foreseen by the appraisal.

An Annual Monitoring Report will be produced to monitor the implementation of the Local Plan, and the recommendations given below for monitoring should be incorporated within this.

Sustainability Objectives		Recommended Indicators
1	Biodiversity	Area of land of biodiversity value lost to minerals development, by significance (international, national, local) Area of land proposed for habitat creation through mineral site restoration Area of accessible land of biodiversity value created through restoration.
2	Climate change	No practical indicators identified.
3	Community and well-being	Sales (tonnage) of aggregates by type and end use Metres/number of public rights of way lost to minerals development Metres/number of public rights of way proposed through restoration of minerals sites. Hectares of designated open space lost to minerals development. Hectares of accessible open space proposed for creation in mineral site restoration.
4	Sustainable economic growth	Sales (tonnage) of aggregates by type and end use
5	Flood risk	Number of flood events near to mineral sites Number of restoration plans proposing restoration to wetland/open water
6	Land	Hectares of good quality agricultural land lost to minerals development Hectares of good quality agricultural land proposed in restoration plans. Area of land of geodiversity value lost to minerals development, by significance

		Hectares of Green Belt land developed for minerals use
7	Landscape and the historic environment	Hectares of land of landscape value taken for minerals development Number of heritage assets lost to development, by type
8	Transport	Tonnage of minerals transported by road Tonnage of minerals transported by rail Accidents on road network involving mineral site traffic. Imports and exports (tonnages) of minerals across county boundary.
9	Water	Number of water pollution events linked to mineral sites.

Table 12: Monitoring Recommendations

8. References

- Site Selection Methodology (KCC, 2017)

Related to SA of Kent MWLP (adopted 2016):

- AECOM, July 2016 – Sustainability Appraisal (SA) of the Kent MWDF – SA Adoption Statement
- Scott Wilson, March 2010 – SA Scoping Report – Introductory Paper URS, 2011 – Interim SA Report (Assessment of Preferred Options)
- URS, November 2013 – Sustainability Appraisal (SA) of the Kent Minerals and Waste Local Plan - SA Report (Consultation Draft)
- URS, July 2014 – Kent County Council: Draft Minerals and Waste Local Plan 2013-30 - Habitats Regulations Assessment
- URS, July 2014 – Sustainability Appraisal (SA) of the Kent Minerals and Waste Local Plan – SA Report Non-Technical Summary

Other references:

- UK Government (2004) Environmental Assessment of Plans and Programmes Regulations 2004
- UK Government (2012) The Town and Country Planning (Local Planning) (England) Regulations 2012
- UK Government (2018) The National Planning Policy Framework
- Shepway District Council (2013) Shepway Core Strategy Local Plan
- Shepway District Council (2018) Council Core Strategy Review, Consultation Draft Plan
- Maidstone Borough Council (2017) Maidstone Borough Local Plan
- Ashford Borough Council (2017) Submission Local Plan 2030
- Tonbridge and Malling Borough Council (2018) Local Plan Regulation 19 Pre-submission Publication
- Tunbridge Wells Borough Council (2016) Site Allocations Local Plan
- Tunbridge Wells Borough Council (2010) Core Strategy DPD
- Dartford Borough Council (2011) Dartford Core Strategy
- London Borough of Bexley (2012) Bexley Core Strategy
- London Borough of Bexley (2017) Bexley Growth Strategy
- Thurrock Council (2015) Core Strategy and Policies for Management of Development (as amended)
- Kent County Council (2016) Local Transport Plan 4: Delivering Growth Without Gridlock 2016-2031

- East Sussex, South Downs and Brighton & Hove Councils (2013) Waste and Minerals Plan
- East Sussex County Council (2017) Waste and Minerals Sites Plan
- Rother District Council (2014) Core Strategy
- East Sussex County Council (2011) Local Transport Plan 3 2011-2026
- London Assembly (2017) New London Plan – Consultation Draft
- Kent County Council (2016) Minerals and Waste Local Plan 2013-30
- Kent County Council (2018) Regulation 19 Consultation: Partial Review of the Kent Minerals and Waste Local Plan 2013-30

Appendix A: Summary of Relevant Policy Objectives from National Planning Policy Framework 2018 and A Green Future

National Planning Policy Framework

Economy

Planning policies should:

- set out a clear economic vision and strategy which positively and proactively encourages sustainable economic growth, having regard to Local Industrial Strategies and other local policies for economic development and regeneration;
- set criteria, or identify strategic sites, for local and inward investment to match the strategy and to meet anticipated needs over the plan period;
- seek to address potential barriers to investment, such as inadequate infrastructure, services or housing, or a poor environment; and
- be flexible enough to accommodate needs not anticipated in the plan, allow for new and flexible working practices (such as live-work accommodation), and to enable a rapid response to changes in economic circumstances.

Planning policies and decisions should enable:

- the sustainable growth and expansion of all types of business in rural areas, both through conversion of existing buildings and well-designed new buildings;
- the development and diversification of agricultural and other land-based rural businesses;
- it will be important to ensure that development is sensitive to its surroundings, does not have an unacceptable impact on local roads and exploits any opportunities to make a location more sustainable

Open space

Planning policies and decisions should protect and enhance public rights of way and access, including taking opportunities to provide better facilities for users, for example by adding links to existing rights of way networks including National Trails.

The designation of land as Local Green Space through local and neighbourhood plans allows communities to identify and protect green areas of particular importance to them. Designating land as Local Green Space should be consistent with the local planning of sustainable development and complement investment in sufficient homes, jobs and other essential services.

Transport

Transport issues should be considered from the earliest stages of plan-making and development proposals, so that:

- the potential impacts of development on transport networks can be addressed;
- opportunities to promote walking, cycling and public transport use are identified and pursued;
- the environmental impacts of traffic and transport infrastructure can be identified, assessed and taken into account – including appropriate opportunities for avoiding and mitigating any adverse effects, and for net environmental gains

Planning policies should be prepared with the active involvement of local highways authorities, other transport infrastructure providers and operators and neighbouring councils, so that strategies and investments for supporting sustainable transport and development patterns are aligned.

In assessing sites that may be allocated for development in plans, or specific applications for development, it should be ensured that:

- appropriate opportunities to promote sustainable transport modes can be – or have been – taken up, given the type of development and its location;
- safe and suitable access to the site can be achieved for all users; and
- any significant impacts from the development on the transport network (in terms of capacity and congestion), or on highway safety, can be cost effectively mitigated to an acceptable degree.

Green Belt

Certain forms of development are not inappropriate in the Green Belt provided they preserve its openness and do not conflict with the purposes of including land within it, including mineral extraction. Planning policies and decisions should recognise that some undeveloped land can perform many functions, such as for wildlife, recreation, flood risk mitigation, cooling/shading, carbon storage or food production.

Flood risk

Inappropriate development in areas at risk of flooding should be avoided by directing development away from areas at highest risk (whether existing or future). Where development is necessary in such areas, the development should be made safe for its lifetime without increasing flood risk elsewhere.

Development should only be allowed in areas at risk of flooding where it can be demonstrated that:

- within the site, the most vulnerable development is located in areas of lowest flood risk, unless there are overriding reasons to prefer a different location;
- the development is appropriately flood resistant and resilient;

- it incorporates sustainable drainage systems, unless there is clear evidence that this would be inappropriate;
- any residual risk can be safely managed; and
- safe access and escape routes are included where appropriate, as part of an agreed emergency plan.

Natural environment

Planning policies and decisions should contribute to and enhance the natural and local environment by:

- protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);
- recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;
- maintaining the character of the undeveloped coast, while improving public access to it where appropriate;
- minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;
- preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and
- remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.

Heritage assets

When considering the impact of a proposed development on the significance of a designated heritage asset, great weight should be given to the asset's conservation. Any harm to, or loss of, the significance of a designated heritage asset (from its alteration or destruction, or from development within its setting), should require clear and convincing justification.

Minerals

Planning policies should:

- provide for the extraction of mineral resources of local and national importance, but not identify new sites or extensions to existing sites for peat extraction;

- so far as practicable, take account of the contribution that substitute or secondary and recycled materials and minerals waste would make to the supply of materials, before considering extraction of primary materials, whilst aiming to source minerals supplies indigenously;
- safeguard mineral resources by defining Mineral Safeguarding Areas; and adopt appropriate policies so that known locations of specific minerals resources of local and national importance are not sterilised by non-mineral development where this should be avoided (whilst not creating a presumption that the resources defined will be worked);
- set out policies to encourage the prior extraction of minerals, where practical and environmentally feasible, if it is necessary for non-mineral development to take place;
- safeguard existing, planned and potential sites for: the bulk transport, handling and processing of minerals; the manufacture of concrete and concrete products; and the handling, processing and distribution of substitute, recycled and secondary aggregate material;
- set out criteria or requirements to ensure that permitted and proposed operations do not have unacceptable adverse impacts on the natural and historic environment or human health, taking into account the cumulative effects of multiple impacts from individual sites and/or a number of sites in a locality;
- when developing noise limits, recognise that some noisy short-term activities, which may otherwise be regarded as unacceptable, are unavoidable to facilitate minerals extraction; and
- ensure that worked land is reclaimed at the earliest opportunity, taking account of aviation safety, and that high quality restoration and aftercare of mineral sites takes place.

A Green Future: Our 25 Year Plan to Improve the Environment

Using and managing land sustainably

- Embedding an 'environmental net gain' principle for development, including housing and infrastructure
- Improving how we manage and incentivise land management, including designing and delivering a new environmental land management system
- Improving soil health and restoring and protecting our peatlands, including developing better information on soil health
- Focusing on woodland to maximise its many benefits
- Reducing risks from flooding and coastal erosion, including expanding the use of natural flood management solutions and putting in place more sustainable drainage systems

Recovering nature and enhancing the beauty of landscapes

- Protecting and recovering nature, including developing a Nature Recovery Network and providing opportunities for the reintroduction of native species
- Conserving and enhancing natural beauty, including reviewing National Parks and Areas of Outstanding Natural Beauty
- Respecting nature in how we use water and reforming our approach to water abstraction

Connecting people with the environment to improve health and wellbeing

- Helping people improve their health and wellbeing by using green spaces
- Creating more green infrastructure

Increasing resource efficiency and reducing pollution and waste

- Maximising resource efficiency and minimising environmental impacts at end of life.
 - Improving management of residual waste
 - Reducing the impact of wastewater
- Reducing pollution
 - Publishing a Clean Air Strategy
 - Curbing emissions from combustion plants and generators
 - Minimising the risk of chemical contamination in our water
 - Ensuring we continue to maintain clean recreational waters and warning about temporary pollution

Appendix B: Assumptions Underpinning Appraisal of Sites (2012 vs 2016)

2012 assessment rationale			2016 Kent methodology						
<p>Reduce the risk of flooding and the resulting detriment to public wellbeing, the economy and the environment</p> <ul style="list-style-type: none"> Mineral extraction in flood zones 2 & 3a = (+) Sand & gravel extraction in flood zone 3b = (+) Non-sand & gravel minerals extraction in flood zone 3b = (-) Waste facility in flood zone 2 = (+) Waste facility, excluding landfill or hazardous waste, in flood zone 3a = (+) Landfill or hazardous waste facility in flood zone 3a = (-) All waste facilities in flood zone 3b = (-) 	<ul style="list-style-type: none"> In flood zones 2 & 3a mineral extraction sites are water compatible and can help to reduce the flood risk faced by nearby communities by providing additional storage for flood waters. Sand & gravel workings are compatible with flood zone 3b. In practice, there is much potential to mitigate flood risk through the incorporation of sustainable drainage systems. 	<p>Flood Risk</p> <p>Proximity to Flood Zones - dependent on type of development (Ref: Planning Practice Guidance*)</p> <p>Mineral extraction can provide opportunities for flood water and general water storage</p> <p><i>Note: The sites will be subject to a separate Sequential Testing exercise in accordance with the NPPF at Stage 3.</i></p>	<p>The site will exacerbate flood risk in areas prone to flooding.</p>	<p>The site is classed as: 'Exception Test Required', according to the Flood Risk Vulnerability and Flood Zone Compatibility Table in the Planning Practice Guidance and other sources of flooding could have a major impact requiring high levels of mitigation</p>	<p>The site is classed as: 'Exception Test Required' according to the Flood Risk Vulnerability and Flood Zone Compatibility Table in the Planning Practice Guidance and other sources of flooding could have a moderate impact requiring medium level mitigation</p>	<p>The site is classed as: 'Development is appropriate', according to the Flood Risk Vulnerability and Flood Zone Compatibility Table in the Planning Practice Guidance and other sources of flooding could have a minor impact that can be mitigated</p>	<p>'Development is appropriate' according to the Flood Risk Vulnerability and Flood Zone Compatibility Table in the Planning Practice Guidance and other sources of flooding could have no impact.</p>	<p>Good opportunities for flood risk mitigation.</p>	<p>GIS Data</p> <p>Consultation with the Environment Agency and flood risk officers.</p> <p>Strategic Flood Risk Assessment (SFRA)</p> <p>Promoter of site</p>
			<p>The site is classed as: "Development should not be permitted" according to the Flood Risk Vulnerability and Flood Zone Compatibility Table in the Planning Practice Guidance*</p> <p>Phase 1 and Phase 2 Hydrogeological Risk Assessment would be required prior to allocation.</p>	<p>Phase 1 Hydrogeological Risk Assessment would be required prior to allocation.</p>	<p>Phase 1 Hydrogeological Risk Assessment would be required prior to allocation</p>	<p>Phase 1 Hydrogeological Risk Assessment would be required prior to allocation</p>	<p>Phase 1 Hydrogeological Risk Assessment would be required prior to allocation</p>		

2012 assessment rationale			2016 Kent methodology						
<p>Ensure that development will not impact on important elements of the biodiversity resource and where possible contributes to the achievement of the Kent Biodiversity Action Plan and other strategies</p>	<ul style="list-style-type: none"> Site within 200m of a designated site of international, national or local importance, or an area of ancient woodland = (-) Site adjacent to or situated on a designated site of international, national or local importance, or an area of ancient woodland = (-) 	<ul style="list-style-type: none"> In practice, there is much potential to avoid and mitigate effects where a waste or minerals site is located in close proximity to an important biodiversity site. Indeed biodiversity enhancements on minerals sites can be beneficiaries to wider biodiversity. 	<p>Nature Conservation and Geodiversity⁽²⁾</p> <p>Proximity to international designations. E.g. SAC, SPA, Ramsar.⁽³⁾</p> <p>Proximity to national designations. E.g. SSSI, National Nature Reserve, Ancient Woodland.</p> <p>Proximity to Local Designations. E.g. Regionally important Geological and Geomorphological Sites (RIGS), Local Wildlife Sites, SNCI and Biodiversity Action Plan (BAP) Habitats⁽⁶⁾.</p> <p>Potential for enhancement of local designations can be taken into account.</p> <p>With all designations the proximity, perceived adverse impacts and the potential for mitigation should be considered.</p>	<p>The site is likely to have an significant effect on international and national designations and adequate mitigation measures are essentially not possible.</p> <p>Site is within or could have unacceptable adverse impact on national designations where there is no evidence that the benefits of the development outweigh the impacts.</p> <p>Impact likely to be severe.</p>	<p>The site is likely to have a significant effect on international designations and mitigation measures are available but are of a nature which means they may not be deliverable.</p> <p>The site is within or could have an unacceptable adverse impact on national designations where there is no persuasive evidence that the benefits of the development outweigh the impacts.</p> <p>The site is within or could have unacceptable adverse impact on local designations where there is no evidence the impacts can be</p>	<p>The site is likely to have a significant effect on international designations, mitigation measures are possible but not included in the proposal.</p> <p>The site is within or could have unacceptable adverse impact on national designations but there is persuasive evidence that the benefits of the development outweigh the impacts.</p> <p>The site is within or could have unacceptable adverse impact on local designations but there is persuasive evidence of the impacts can be mitigated or compensated such that there is net benefit.</p>	<p>The site could potentially impact international and national designations and mitigation measures are included in the proposal which are sufficient enough to avoid a likely significant effect.</p> <p>The site is unlikely to have an unacceptable impact on local designations. Impacts could be addressed with mitigation.</p> <p>The site is considered to have a minor impact upon local sensitivity receptors.</p>	<p>The site is not likely to have any significant effect on international, national or local designations.</p> <p>The site is considered to have no impact upon local sensitivity receptors.</p>	<p>GIS data</p> <p>Consultation with Natural England and biodiversity officers</p> <p>Promoter of site</p>
				<p>mitigated or compensated such that there is net benefit.</p> <p>Impact is likely to be severe to moderate.</p> <p>The site is considered to have a major impact upon local sensitivity receptors.</p>	<p>Impact is likely to be severe to moderate.</p> <p>The site is considered to have a moderate impact upon local sensitivity receptors.</p>				

2012 assessment rationale

2016 Kent methodology

- Protect and enhance Kent's countryside and historic environment
- Site located within an AONB = (-)
 - Site within 200m of an AONB = (-)
 - SAMs or listed buildings on site, or if the site is within a historic park and garden = (-)
 - Site is located within 100m of a SAM, listed building, or historic park and garden = (-)
 - Site with archaeological potential = (?)
 - Mineral site located on greenfield land within Green Belt = (-)
 - ~~Waste site located on brownfield land within Green Belt = (-)~~
 - ~~Waste site located on greenfield land within Green Belt = (-)~~
- ~~Waste sites are generally unsuitable for the Green Belt; although if – situated on brownfield land a judgement on whether they are have a – greater effect than the existing use must be made –~~
 - Sites which have archaeological potential could have positive or negative effects, dependent on the management of excavations.
 - The effect of individual developments on the countryside and historic environment can be influenced by a number of factors, including lines of sight. As such, in practice there is much potential to avoid and mitigate effects where minerals and waste sites and sensitive features are in close proximity.

<p>Landscape Designations/Visual Impact</p> <p>The significance of any landscape and visual impact is dependent on a number of factors, such as the proximity to sensitive viewpoints, presence of screening features, direct effect on landscape fabric, existing landforms and the proximity to Kent's landscape designations of national importance.</p> <p>Kent has two nationally important landscape designations- the Kent Downs and the High Weald Areas of Outstanding Natural Beauty (AONB).</p>	<p>The site is in the AONB, there are no exceptional circumstances¹⁾ and the development cannot be demonstrated to be in the public interest.</p> <p>The site is in the open countryside and the development would have a severe impact on its intrinsic character that cannot be adequately mitigated.</p>	<p>The site is in the AONB but there may be exceptional circumstances and it may be in the public interest.</p> <p>The site is adjacent to or within the setting of the AONB and could have a major adverse impact on the landscape designation that may well require high level mitigation.</p> <p>The site falls outside the AONB and could have a moderate adverse impact on the landscape that may well be difficult to mitigate.</p> <p>The site is considered to have a major impact upon local sensitivity receptors and/or the intrinsic character of the</p>	<p>The site is in the AONB, and there are exceptional circumstances and it is in the public interest but it could have an adverse impact on the landscape designation.</p> <p>The site is adjacent to or within the setting of an AONB and could have a moderate adverse impact on the landscape designation, that may well require medium level mitigation.</p> <p>The site falls outside the AONB and could have a moderate adverse impact on the landscape that could require medium level mitigation.</p> <p>The site is considered to have a moderate impact upon local sensitivity receptors and/or the</p>	<p>The site is adjacent to or within the setting of the AONB and could have a minor adverse impact on the landscape designation, requiring low level mitigation.</p> <p>The site falls outside the AONB and could have a minor adverse impact on the landscape that could require low level mitigation.</p> <p>The site is considered to have a minor adverse impact upon local sensitivity receptors and/or the intrinsic character of the countryside that may well require low level mitigation.</p>	<p>The site is not within the AONB or its setting and would have no impact on the landscape designation.</p> <p>The site falls outside the AONB and could have a very minor impact on the landscape designation that could be addressed with mitigation.</p> <p>The site is considered to have no impact upon local sensitivity receptors or the intrinsic character of the countryside.</p>	<p>GIS Data</p> <p>The Kent Landscape Assessment Parts 1 and 2 (2003) Landscape character area design guidance (Kent Downs AONB & High Weald AONB)</p> <p>Consultation with landscape specialists.</p> <p>Promoter of site</p>
		<p>countryside that may well require high level mitigation.</p>	<p>intrinsic character of the countryside that may well require medium level mitigation.</p>			
<p>Historic Environment</p> <p>Proximity to Kent's heritage assets, including registered historic parks and gardens, Listed Buildings, a conservation area or its setting, World Heritage Sites, Scheduled Ancient Monuments, archaeological sites and features and defined heritage coastline.</p> <p>There is a presumption in favour of preserving Listed Buildings and their setting, nationally important archaeological remains in situ and their setting.</p> <p>Proposals for development should not have an adverse effect on Kent's heritage assets including its fabric, setting, amenity value and arrangements for reinstatement.</p>	<p>The site could cause a severe unacceptable adverse impact on Kent's heritage assets and/or its setting.</p> <p>No opportunity to maintain or enhance historic asset.</p>	<p>The site may cause a major adverse impact to Kent's heritage assets and/or its setting in the absence of high level mitigation.</p>	<p>The site may cause a moderate adverse impact to Kent's heritage assets and/or its setting in the absence of medium level mitigation.</p>	<p>The site may cause a minor adverse impact to Kent's heritage assets and/or its setting in the absence of low level mitigation.</p> <p>High possibility to result in net planning benefit.</p>	<p>The site may not cause any adverse impact to Kent's heritage assets and/or its setting.</p>	<p>GIS data</p> <p>Consultation with Historic England and officers specialised in archaeology and the historic environment</p> <p>Promoter of site</p>

2012 assessment rationale		2016 Kent methodology						
<p>Maintain and improve the water quality of the Kent's rivers, ground waters and coasts, and achieve sustainable water resources management</p>	<ul style="list-style-type: none"> Waste facility, excluding landfill or hazardous waste, in SPZ 2 or 3 = (-) Waste facility, excluding landfill or hazardous waste, in SPZ 1 = (+) Landfill or hazardous waste site in SPZ 2 or 3 = (-) Landfill or hazardous waste site in SPZ 1 = (+) Minerals extraction in SPZ 2 or 3 = (-) Minerals extraction in SPZ 1 = (-) <ul style="list-style-type: none"> The EA has advised that there is no objection to non-landfill waste management uses in Source Protection Zone (SPZ) 2 or 3, and to existing sites which are in SPZ 1. New non-landfill waste management sites in SPZ 1 may have a negative effect on water quality due to accidental pollution incidents. Minerals extraction and landfill or hazardous waste sites in SPZ 2 or 3 could potentially lead to some negative effects on water quality due to accidental pollution impacts, whilst in Source Protection Zone 1 the effects of such incidents may be significantly negative. In practice, there is much potential to avoid and mitigate effects through onsite design and management measures. 	<p>Water Quality</p> <p>Proximity to Source Protection Zones⁽⁴⁾ (SPZ) or major/minor aquifers</p> <p>Proximity to vulnerable above-ground water bodies. The Water Framework Directive objectives seek no deterioration in current water quality and good status in all water bodies)</p>	<p>The site could have a severe unacceptable adverse impact upon groundwater SPZs and/or result in the deterioration of any water resource.</p> <p>The site could have a severe unacceptable impact upon waterbodies within the site and or hydrologically connected to the site.</p> <p>Phase 1 and Phase 2 Hydrogeological Risk Assessment would be required prior to allocation.</p>	<p>The site could have a major adverse impact on groundwater SPZs or water resources in the absence of high level mitigation</p> <p>The site may have a major impact on vulnerable water bodies in the absence of high level mitigation.</p> <p>Phase 1 Hydrogeological Risk Assessment would be required prior to allocation.</p>	<p>The site could have a moderate adverse impact on groundwater SPZs or water resources in the absence of medium level mitigation</p> <p>The site may have a moderate impact on vulnerable water bodies in the absence of medium level mitigation.</p> <p>Phase 1 Hydrogeological Risk Assessment would be required prior to allocation</p>	<p>The site could have a minor adverse impact on groundwater SPZs or water resources in the absence of low level mitigation</p> <p>The site may have a minor impact on vulnerable water bodies in the absence of low level mitigation.</p>	<p>The site will have no unacceptable impact on water resources.</p>	<p>GIS Data</p> <p>Promoter of site</p>
<p>Reduce and minimise unsustainable transport patterns and facilitate the transport of minerals and waste by the most sustainable modes possible</p>	<ul style="list-style-type: none"> Data limitations prevent an appraisal of sites in terms of this objective. If data becomes available (to enable a consistent appraisal of sites that highlights the relative merits of alternative sites) then this will be drawn on to appraise sites against this objective at the Proposed Submission / SA Report stage. 	<p>Transport (Including Access)</p> <p>Proximity to Kent's Trunk Roads, Primary Route Network and Secondary Route Network will be assessed, including the presence of width, height and weight restrictions along these routes</p>	<p>The site could have a severe unacceptable adverse impact on transport and access/egress in the absence of high level mitigation.</p> <p>There are severe issues with access to the Primary Route Network and Secondary Route Network.</p> <p>Mitigation is not practical.</p>	<p>The site could have a major adverse impact on transport and access/egress in the absence of high level mitigation.</p> <p>There are major issues with access to the Primary Route Network and Secondary Route Network.</p> <p>The identified impacts could be mitigated through planning obligations.</p>	<p>The site could have a moderate adverse impact on transport and access/egress in the absence of medium level mitigation.</p> <p>There are moderate issues with access to the Primary Route Network and Secondary Route Network.</p> <p>The identified impacts could be mitigated through planning obligations.</p>	<p>The site could have a minor adverse impact on transport and access/egress in the absence of low level mitigation.</p> <p>There are minor issues with access to the Primary Route Network and Secondary Route Network.</p> <p>The identified impacts could be mitigated through planning obligations.</p>	<p>The site will not give rise to any adverse impacts (including access/egress considerations) upon transport and access to Primary and Secondary Route Network.</p>	<p>GIS data</p> <p>Officer assessment</p> <p>Promoter of site</p>

2012 assessment rationale			2016 Kent methodology						
<p>Make efficient use of land and avoid sensitive locations</p>	<ul style="list-style-type: none"> Waste site (excluding landfill) that would result in loss of grade 1 or 2 agricultural land = (-) Minerals or landfill site that would result in loss of grade 1 or 2 agricultural land = (-) Site located on previously developed, brownfield land = (++) 	<ul style="list-style-type: none"> Waste sites that would result in the loss of grade 1 or 2 agricultural land may have a significant negative effect, as the loss of this high quality land does not represent efficient usage. Minerals and landfill sites score a lesser negative effect, due to the potential for their restoration 	<p>Soil Quality</p> <p>Proximity or location of best and most versatile agricultural land (Grade 1) and Very Good (2) grades, Good to Moderate (Grade 3). Where significant development of agricultural land is unavoidable, poorer quality land should be used in preference to higher quality.</p> <p>Consider location of sensitive land and soils</p> <p>Potential for enhancement</p>	<p>The entire site contains best and most versatile land/or very good and/or good to moderate which may well be severely impacted (such as irretrievably damaged or simply lost) by the development.</p>	<p>Large parts of the site contain best and most versatile land and/or very good and/or good to moderate which could well be significantly adversely impacted by the development for which mitigation does not appear possible.</p>	<p>The site contains best and most versatile and/or very good and/or good to moderate land which may well be moderately impacted by the development.</p> <p>Opportunities for mitigation and restoration exist.</p>	<p>The development could impact best and most versatile and/or very good and/or good to moderate land though may only require minor mitigation to preserve.</p> <p>Good opportunities for mitigation and restoration.</p>	<p>The site contains low quality agriculture soil poor (Grade 3) and/or very poor (Grade 4) only or has no impact on any best and most versatile land and/or very good and/or good to moderate land that is present at the site.</p> <p>There could be opportunities to restore the site and enhance the quality of soil.</p>	<p>GIS data</p> <p>Consultation with landscape officers and Natural England if necessary</p> <p>Officer Assessment</p> <p>Promoter of site</p>
<p>Amendment for 2018 assessment: Minerals site that would result in loss of grade 1, 2 or 3a agricultural land = (-) Site is located within the green belt = (-)</p>			<p>Green Belt</p> <p>Within the NPPF is a presumption to consider development within the Green Belt as inappropriate. Inappropriate development is by definition, harmful to the openness of the Green Belt and should be refused except in very special circumstances.</p> <p>There are certain types of development which are exceptions to this rule, they do not require Very Special Circumstances.</p>	<p>Site constitutes inappropriate development within the Green Belt, and no substantive case for very special circumstances has been presented.</p>	<p>Site constitutes inappropriate development within the Green Belt and a case for very special circumstances has been presented. Major levels of mitigation may be required.</p>	<p>Site constitutes inappropriate development within the Green Belt, but a substantive persuasive case for very special circumstances has been presented. Medium levels of mitigation may be required.</p>	<p>Site constitutes inappropriate development within the Green Belt and a substantive persuasive case for very special circumstances has been presented. Low levels of mitigation may be required.</p>	<p>Site is not within the Green Belt.</p> <p>Site is within the Green Belt but it is not considered inappropriate development.</p>	<p>GIS data</p> <p>Officer assessment</p> <p>Promoter of site</p>

2012 assessment rationale

Support efforts to create and sustain sustainable communities, particularly the improvement of health and well-being	<ul style="list-style-type: none"> Site within 100m of a dwelling = (-) Site within within 50m = (-) Site within or adjacent to an AQMA = (-) Site within 200m of an AQMA = (-) Site adjacent to, or crossed by a footpath (public right of way) = (-) Site within 50m of a footpath = (-) 	<ul style="list-style-type: none"> Sites which are within, adjacent, or close to an Air Quality Management Area (AQMA) may have a negative effect if they result in air pollution directly or indirectly as a result of increased traffic. In practice, there is much potential to mitigate effects on health and well-being, although it may be possible to avoid effects all together as the public perception of waste-end-minerals development is almost always poor. Where sites are in close proximity to sensitive receptors, onsite design and management measures can reduce pollution (e.g. noise, odour and dust), whilst careful management of traffic will be another important consideration.
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Amendment for 2018 assessment:

Site is designated as open green space = (-)

2016 Kent methodology

<p>Air Quality</p> <p>Emissions to air can be of concern at some facilities- dealt with at planning application stage if necessary through use of conditions and controls</p> <p>Proximity to Air Quality Management Areas- Impacts on AQMA could be mitigated by conditions and controls.</p>	The site is within an AQMA, unacceptable adverse impacts cannot be mitigated.	N/A	The site is near to an AQMA or may have adverse impacts on air quality that is capable of mitigation.	N/A	The site poses low or no risk of adverse impacts to AQMAs or air quality.	GIS Data Officer assessment Promoter of site
<p>Public Rights of Way (PRoW)</p> <p>Consider the presence of public rights of way (Highways Act 1980 Section 41)</p>	The site could cause severe unacceptable adverse impact upon the PRoW without	The site could cause major adverse impact upon the PRoW network and Kent's Long	The site could cause moderate adverse impact upon the PRoW network and Kent's Long Distance Trails but	Site is in the vicinity of a the PRoW network and Kent's Long Distance Trails and may only cause minor adverse impacts on PRoW	Site will have no effect on PRoW network and Kent's Long Distance Trails.	GIS data Consultation with the County Council's PRoW officers
<p>Highways Act 1980 Section 130(1), duty of highway authority to assert and protect the rights of the public to the use and enjoyment of any highway</p> <p>Impact on long distance trails (e.g. North Downs Way and England Coast Path)</p> <p>Potential for enhancement (would be sought at all sites)</p>	satisfactory provision for diversion and/or mitigation. Significant adverse impact upon Kent's Long Distance Trails.	Distance Trails but this could be satisfactorily diverted and/or extensively mitigated	this could be satisfactorily diverted and/or mitigated.	network and Kent's Long Distance Trails	An opportunity for enhancement has been identified.	Promoter of site
<p>Health and Amenity</p> <p>This includes impact of noise, dust, vibration, odour, emissions, bioaerosols, illumination, visual intrusion, traffic, quality of life and community and environment wellbeing. The National Planning Policy Framework (NPPF) and the Kent MWLP state that the adverse impact of minerals and waste development on neighbouring communities should be minimised.</p> <p>Consider proximity of local communities whose amenity may be impacted by development</p> <p>Appropriate and suitable mitigation measures to reduce the risk of unacceptable adverse impacts should be considered.</p>	The site could cause severe unacceptable adverse impact on health and amenity on the locality with no mitigation demonstrated as possible. The site could cause a severe impact to adjacent land uses.	The site could cause major adverse impact to health and amenity of the locality in the absence of a high level of mitigation. The site could cause a major impact to adjacent land uses.	The site may cause a moderate adverse impact to health and amenity in the absence of medium levels of mitigation. There may be a possibility for the development to result in an overall net planning benefit to the location. The site could potentially cause a moderate impact to adjacent land uses, adequate mitigated may be possible.	The site may cause a minor adverse impact to health and amenity in the absence of low level mitigation. High possibility to result in net planning benefit. The site could cause a minor impact to adjacent land uses that could potentially be mitigated adequately.	The site may not cause any adverse impact to health and amenity to the locality. The site could not acceptably impact adjacent land uses.	Officer assessment Promoter of site

2012 assessment rationale	2016 Kent methodology						
<p>NO SIMILAR 2012 ASSESSMENT HEADINGS</p>	<p>Services and Utilities</p> <p>Sites need sustainable access to utilities.</p>	<p>The site contains services or utilities which could be severely impacted on - no</p>	<p>The site contains services or utilities which could require major mitigation through rerouting, or the location</p>	<p>The site contains services or utilities that could require consideration to effect any necessary</p>	<p>The site is near to services or utilities and any minor adverse impacts will require low-level mitigation.</p>	<p>There are no services or utilities near to, or within the site.</p>	<p>Officer assessment</p> <p>Utility providers</p>
	<p>Equally, they should not interfere with any utilities which pass underneath. Mitigation measures will be considered in terms of cost and benefits.</p> <p>Utilities include water, gas, electricity and telecommunications, as well as railways, HS1 and Crossrail assets.</p>	<p>mitigation measures can be used.</p>	<p>cables/pipes hampers the ability to maximise capacity yield from the site.</p>	<p>re-routing or other medium levels of mitigation.</p>			<p>Promoter of site</p>
	<p>Cumulative Impacts</p> <p>NPPF states that policies and proposals should take account of existing activity and impacts, the duration and nature of proposals for new or further workings, and the extent of impacts that a particular site, locality, community, environment or wider areas of mineral working can reasonably be expected to tolerate over a particular or proposed period. This is supported by the Kent MWLP.</p>	<p>The cumulation of activity at the site with existing development may well result in an unacceptable adverse impact on the environment and/or communities that cannot be satisfactorily mitigated.</p>	<p>The cumulation of activity at the site with existing development may well result in an unacceptable adverse impact on the environment and/or community that will require high level mitigation.</p>	<p>The cumulation of activity at the site with existing development may well result in a moderate impact on the environment and/or community that will require medium level mitigation.</p>	<p>The cumulation of activity at the site with existing development may well have some impact on the environment and/or community that will require low level mitigation.</p>	<p>There are no concerns of cumulative impacts resulting from the development of the site.</p>	<p>Officer assessment</p> <p>Promoter of site</p>
	<p>Aerodrome Safeguarding Zones</p> <p>Aircraft are vulnerable to birdstrikes, and 80% of all strikes occur on an aircraft's take-off or landing phase of flight, therefore highlighting the necessity for wildlife management on and within proximity of an airfield. Aerodrome administrators are responsible for monitoring bird activity within the relevant radius of the aerodrome. This is to mitigate the birdstrike risk to aircraft and be aware what species are in the local area. Many types of development, including large, flat-roofed structures, landfill sites, gravel pit restoration schemes and nature reserves</p>	<p>The site is within an Airport Safeguarding Zone and the nature of the site is likely to attract birds and increase the risk of bird strike for aircraft.</p> <p>No mitigation is practical or possible.</p>	<p>The site is within an Airport Safeguarding Zone and the nature of the site is likely to attract birds and increase the risk of bird strike for aircraft.</p> <p>High level mitigation is required which may make the site undeliverable.</p>	<p>Site is within an Airport Safeguarding Zone. Either:</p> <p>Nature of the site means that it is unlikely to attract birds and increase the risk of birdstrike for aircraft.</p> <p>The site is likely to be deliverable through employing medium level mitigation measures so it is unlikely to attract birds and increase the risk of birdstrike.</p>	<p>Site is within an Airport Safeguarding Zone. Either:</p> <p>Nature of the site means that it is unlikely to attract birds and increase the risk of birdstrike for aircraft.</p> <p>The site is likely to be deliverable through employing low level mitigation measures so it is unlikely to attract birds and increase the risk of birdstrike.</p>	<p>The site is not within an Airport Safeguarding Zone.</p>	<p>CAA, NATS</p> <p>Officer assessment</p> <p>Promoter of site</p>

Appendix C: SA of Site Selection Methodology – Assessment Matrix (Information Sought from Applicants & Method of RAG Assessment)

	Sustainability Objective	Comments
1	Biodiversity	Nature conservation is considered by the Sustainability Objectives and by the KCC Site Selection Methodology in terms of ensuring important elements of the resource are maintained and enhancements considered. The KCC methodology does not explicitly consider access to biodiversity. Assessment methodologies are compatible in looking at impacts on biodiversity. The SA Sustainability Objectives are more comprehensive in looking at access to biodiversity which can be provided in restoration plans.
2	Climate change	The SA Sustainability Objective explicitly looks at the impacts on climate change whereas the KCC site selection methodology does not, although in reality there will be limited scope for mineral sites to ameliorate impacts. Detailed analysis of climate change impacts are undertaken at planning application stage, where they are fully considered.
3	Community and well-being	<p>PRoW's are considered in terms of access and long distance trails and public use and enjoyment in the KCC Site Selection Methodology. Opportunities for enhancement are sought. This is linked to sustainable transport modes. The SA Sustainability objectives consider sustainable communities including in relation to health and wellbeing. The appraisal has considered the impact on PRoWs as a component of this.</p> <p>Health and amenity are considered by the KCC Site Selection Methodology and the Sustainability Objectives. The approaches appear to be comparable.</p> <p>The KCC methodology considers impacts on air quality and proximity to AQMAs. Air quality is considered by the Sustainability Objectives categorised under the objective for community and wellbeing. Air quality is considered by both approaches in terms of acceptability and impacts on health and wellbeing.</p>

Page 501

4	Sustainable economic growth	The KCC methodology does not assess the contribution of sites to sustainable economic growth.
5	Flood risk	The KCC methodology considers proximity to flood zones and the impact on flood risk and seeks opportunities to reduce flood risk. The methodologies are compatible on flood risk management.
6	Land	<p>Geodiversity is considered by the Sustainability Objectives and by the KCC Site Selection Methodology in terms of ensuring important elements of the resource are maintained and enhancements considered. Assessment methodologies are compatible in looking at impacts on geodiversity.</p> <p>Soil quality is considered in terms of agricultural land and sensitive soil sites in the KCC Site Selection Methodology. Agricultural land is considered by the Sustainability Objectives. This has been added into the SA appraisal objectives to ensure that this aspect is included in the appraisal.</p> <p>Greenbelt land is considered by the KCC Site Selection Methodology. It has not previously been explicitly included in the SA Sustainability Objectives. The consideration of impacts on green belt has been added to the SA Sustainability Objectives to ensure that this is covered by the appraisal.</p>
7	Landscape and the historic environment	<p>Landscape is considered by the KCC Site Selection Methodology in terms of impacts on AONBs and local landscapes, with reference to assessments and other landscape studies. The KCC approach corresponds with the scope of the SA Sustainability Objective in landscape terms.</p> <p>The KCC Site Selection Methodology considers the importance of retaining heritage sites and assets in terms of setting (landscape), amenity value and presence of assets, which is part of the sustainability objectives. The assessments are compatible.</p>

8	Transport	<p>Transport is considered by the KCC Site Selection Methodology in terms of access to networks and impacts on them. The SA Sustainability objectives consider transport impacts, including the impacts on networks, the promotion of sustainable modes and minimisation of transport. The methodologies are compatible in terms of access and impacts, but the SA is more comprehensive in considering sustainable transport and minimising the need for transport. This is indirectly linked to climate change and air quality impacts as well as network impacts.</p> <p>The KCC methodology considers impacts on air quality and proximity to AQMAs. This is indirectly linked to the appraisal objective on transport which seeks to limit transport demand and promote sustainable modes.</p>
9	Water	<p>The KCC methodology considers impacts on groundwater and other water resources. It does not seek to promote sustainable water management, although the likelihood of mineral sites being able to contribute in a significant way to this objective is very small.</p> <p>Mineral operations may have impacts on the water environment through dewatering and this is considered more fully in the SA of sites. The methodologies are compatible on impacts on water quality and resources.</p>

Appendix D: Detailed Findings and Recommendations of SA of Sites

Key:

Impacts	Probability of effects	Direct or indirect effects	Reversibility
++ significant positive effect	L low probability	D direct effect	Y reversible effect
+ some positive effect	M medium probability	I indirect effect	N not reversible i.e. permanent effect
0 no effect	H high probability		
- some adverse effect			
-- significant adverse effect			
? uncertain effect			

Page 504

Site M2: Lydd Quarry Extensions

	Sustainability Objective	Comments					
		Short	Med	Long	Prob	Dir/Ind	Rev?
1	Biodiversity	--	--	--	H	D/I	N
		<p>Parcel 19 of the proposed allocation is within the Dungeness, Romney Marsh and Rye Bay Ramsar site and SPA/Ramsar designated site. The site will have a direct impact upon the SPA (the one parcel) and likely indirect impacts on the wider SPA and the Dungeness SAC and Dungeness, Romney Marsh and Rye Bay Ramsar Site. The whole site lies within the Dungeness, Romney Marsh and Rye Bay SSSI and supports a range of nationally important plant and animal species. The biodiversity value of the SSSI will be lost from the site.</p> <p>Lydd Common and Pastures Local Wildlife Site (LWS) abuts part of the proposed allocation (to the south of parcel 23 Allens Bank) and there is the potential for adverse impacts on the site from mineral working. Ecological surveys should be undertaken</p>					

		<p>in accordance with KMWLP Policy DM 3 Ecological Impact Assessment that may require Appropriate Assessment in accordance with the Habitat Regulations, to determine the scale and nature of impacts and appropriate mitigation of impacts. This could include a buffer between areas worked and the adjacent LWS, along with planting to mitigate visual and noise disturbance.</p> <p>Parts of the proposed site support coastal priority habitats (parcels 16, 22 and 23). The site also contains hedgerows which could warrant status as a priority habitat if they contain greater than 80% native species but are not currently categorised as such. Hedgerows and areas of rough grassland on the site may contain suitable habitat for protected/notable species not associated with the designated sites. Records from the site and the wider area that are potentially relevant to this assessment include records of great crested newt, badger, common lizard, slow worm, grass snake, water vole and numerous bird records. The proximity of the site to Lydd Petty Sewer means that operations have the potential to adversely affected protected species recorded as being present in the water course.</p> <p>Potential impacts could arise from dust, noise, light, disturbance, direct land take and changes to the hydrology and water quality of the area. In accordance with KMWLP Policy DM 3 Ecological Impact Assessment any planning application must be accompanied by a full ecological assessment that may require Appropriate Assessment in accordance with the Habitat Regulations, including appropriate ecological surveys (in addition to those done to date in support of the promoted site that state further survey work is required to assess fully the ecological impacts and any possible mitigation) to assess the impact on the designated sites and protected/notable species. Sufficient mitigation should be provided to avoid adverse impacts (if achievable) in accordance with KMWLP Policies DM 2 Environmental and Landscape Sites of International, National and local Importance, Policy DM 3 Ecological Impact Assessment and DM 19 Restoration, Aftercare and After-use.</p>							
2	Climate change	Short	Med	Long	Prob	Dir/Ind	Rev?		
		?	?	0	L	D	N		
		<p>The site is proposed as an extension to existing operations, although no information is given on the phasing of the new workings in relation to the existing operations. If the site will be worked following completion of the existing workings, there will be no change to climate change impacts, provided there is no significant increase in HGV movements. If the site will be worked in parallel to the existing operations, there will be an increase in HGV movements and onsite processing which will have a negative impact on climate change, albeit small when considered in terms of the emissions in the county as a whole.</p>							

3	Community and well-being	Short	Med	Long	Prob	Dir/Ind	Rev?	
		-	-	-/0	M	D	Y	
<p>The England Coast Path National Trail and Sustrans Cycle Route abut the southern boundary of two parcels of land and the workings would be visible from these routes without appropriate mitigation. It is proposed to screen the workings from the paths by the construction of temporary grass bunds. Several public footpaths and bridleways are found in close proximity to the site and pass through specific areas, including bridleway No. HL27 through area 16 and footpath No. HL26 through area 19. These would be subject to diversions in accordance with KMWLP policy XX. In accordance with KMWLP Policy DM 11 Health and Amenity, diverted paths must preserve the connectivity of routes and made safe for all users, including equestrian users. With restoration to open water, the original routes of the footpaths are likely to be lost.</p> <p>There are no AQMAs in proximity to the site. However, residential areas lie adjacent to some parts of the site there is the potential for impacts on nearby residential areas from dust, noise, vibration, visual intrusion and light. Adequate mitigation of the impacts must be incorporated into proposals for site operations in accordance with KMWLP Policy DM 11 Health and Amenity</p>								
4	Sustainable economic growth	Short	Med	Long	Prob	Dir/Ind	Rev?	
		++/-	++/-	0	H	D	N	
<p>The site would make a contribution to the supply of sharp sand and gravel as a material to support economic growth, although the use of non-renewable resources does not constitute the most sustainable route to growth.</p>								
5	Flood risk	Short	Med	Long	Prob	Dir/Ind	Rev?	
		?	?	?	L	D	N	
<p>The site lies within flood zone 3. In accordance with KMWLP DM 10 water Environment, any planning application must be accompanied by a site-specific Flood Risk Assessment to demonstrate no adverse effect on flood risk and where practicable contribute to an overall reduction in flood risk.</p>								
6	Land	Short	Med	Long	Prob	Dir/Ind	Rev?	
		-/?	-/?	-	H	D	N	

		The proposed site contains sensitive geomorphology which would be lost if the site is worked. The site is designated as a SSSI for its geomorphology and working of the site would remove the feature. It may be possible to use the extraction of the resource as a way of better understanding the feature, but the loss from the SSSI may reduce the capacity to understand the evolution of the SSSI in the future.					
		Short	Med	Long	Prob	Dir/Ind	Rev?
		0/?	0/?	0	M	D	N
7	Landscape and the historic environment	<p>The site lies within a Local Landscape Area in policy CO5 saved from the Shepway District Local Plan (2006) under the Shepway Core Strategy Local Plan (2013). The landscape of the Dungeness peninsula is flat and very open. Parts of Lydd are designated as a Conservation Area (c.200m south-east) which also includes a number of Listed Buildings, the closest being The Grange (Grade II) which is c.380m from Area 16. There are Listed Buildings located outside the Conservation Area and within the village environs at some distance from the site and separated by areas of built form. Listed Buildings within c.250m of the site include Tournay Hall (Grade II) which is c.130m east of area 21 and also within c.185m south of areas 18 and 20. There is a Scheduled Monument, an abandoned medieval church and graveyard, Midley, which is c.1.8km north of area 17. </p> <p>It is proposed to screen operations from the paths and the town, including the nearby listed building, by temporary grassed bunds. No new buildings are proposed to be constructed. It is proposed to restore the site after operations have ceased to mainly lakes, reed beds, permanent pasture and ungrazed margins. While this would not alter the openness of the landscape, it would alter the character of the immediate area, although the Landscape and Visual Impact Assessment assesses the long term impacts as insignificant.</p> <p>In accordance with KMWLP DM 5 Heritage Assets any planning application should demonstrate that the impacts on landscape and on heritage assets in the vicinity of the proposed development can be appropriately mitigated. A planning application must provide further information on the impact that parcel 23 Allens Bank could have on the listed building; Westbrook Farmhouse.</p> <p>The area has potential for archaeological value and, in accordance with KMWLP DM 6 Historic Environment Assessment any planning application should be accompanied by an assessment of the archaeological value of the site and a proposed plan for preserving remains in situ where possible or removing and conserving remains offsite.</p>					

8	Transport	Short	Med	Long	Prob	Dir/Ind	Rev?	
		?	?	0	M	D	Y	
<p>The 2007 planning permission states that there should be no more than 250 HGV movements a day (125 in and 125 out). If this is maintained over the life of the site, then the proposal will not generate extra vehicle movements than the previous permission. Provided any existing reserves are exhausted before the proposed area is developed this rate of HGV generation would not be unacceptable. Any planning permission would require to be conditioned to 250 HGV movements a day (125 in / 125 out). No commercial vehicular access for mineral extraction is acceptable for Allens Bank (parcel 23).</p>								
9	Water	Short	Med	Long	Prob	Dir/Ind	Rev?	
		-	-	-	M	D	N	
<p>The site overlies groundwater deposits and there is the potential for impacts on water quality and any sensitive habitats. If operations will involve dewatering, this has the potential to lower ground and surface water levels and introduce saline water into drainage channels. In accordance with KMWLP Policy DM 10 water Environment any planning application must demonstrate no adverse effect on water levels and water quality. Operations should be conducted appropriate for the management of the water environment to ensure there are no adverse impacts with a particular emphasis on salinity and water levels.</p> <p>Sewerage infrastructure crosses the site, and a wastewater treatment works is adjacent. In accordance with KMWLP Policy DM 8 any planning application must be accompanied by adequate proposals to show the sewerage infrastructure can be diverted and the treatment works will remain operational.</p> <p>The site is within the Secondary Aquifer & Groundwater Vulnerability Zone notation for the area and the Minor Aquifer High notation that covers the whole site. However, relevant planning conditional controls could be imposed on any specific application for depth of excavations, de-watering of extraction cells, pollution control methods and ways of working to safeguard against potential impacts on water quality and any sensitive habitats.</p>								

Sustainability Objective		Comments					
1	Biodiversity	Short	Med	Long	Prob	Dir/Ind	Rev?
		-	-	?	M	D	N
<p>The site has Ancient Woodland (Roughett Shaw) immediately adjacent to the access route and therefore the proposal must ensure that the ancient woodland area will not be subject to any negative impact upon this protected habitat. Therefore a buffer and/or dust suppression are likely to be required.</p> <p>Priority habitats are adjacent to the site. Due to the potential for ground nesting breeding birds and protected/notable species within the woodland, hedgerow and water bodies (great crested newts, reptiles, bats and breeding birds) there will be a need for ecological surveys to be submitted within any planning application to demonstrate that the impacts can be appropriately mitigated. The restoration scheme should demonstrate that it is increasing the area of suitable habitat for biodiversity.</p> <p>Lenham Heath & Chilston Park Local Wildlife Site is adjacent to the proposed site, immediately to the south of Lenham Heath Road. Bull Heath Pit Local Wildlife Site is also adjacent, situated to the east of Bull Hill. Proposals must be assessed for any potential adverse impacts on these wildlife sites, including through disturbance caused by noise and traffic. Appropriate mitigation should be provided to protect the LWSs.</p> <p>The proposed development is in proximity to two sites that have been designated as SSSI, Lenham Quarry and Hart Hill (at 800m and 2.5km respectively). Given the distance from the proposed workings, adverse effects are unlikely.</p>							
2	Climate change	Short	Med	Long	Prob	Dir/Ind	Rev?
		-	-	0	H	D	N
<p>The site is a new site rather than a phased extension to existing workings and therefore will add to emissions from HGV movements and other site traffic and on-site processing. This will have a negative impact on climate change, albeit small when considered in terms of the emissions in the county as a whole.</p>							

3	Community and well-being	Short	Med	Long	Prob	Dir/Ind	Rev?	
		-	-	0	H	D	Y	
		<p>Several paths cross the site, including the important Stour Valley Walk, and will be affected by the proposed workings. These will require diversion to maintain the connectivity of footpaths in the area and the safety of users of the paths although routes will be longer and less convenient. Appropriate screening should be provided to mitigate the visual impacts to users of the paths, and if necessary buffers should be provided to ensure safety. Dust and noise suppression should be employed. Residential properties near to the site require screening from visual impacts with appropriate planting.</p> <p>The site is rural and remote from any significant area of residential development or AQMAs. There are a small number of individual air quality sensitive receptors within 120m of the site: along Lenham Heath Road, to the north of the Lenham Heath Road and dwellings at the end of Mount Castle Lane to the north east. These are at risk of impacts from dust and to a lesser extent health risk from HGV emissions. Mitigation against any potential adverse impacts from quarry operations are considered to be fully achievable and should be demonstrated in any planning application. However, the Maidstone AQMA could be a constraint to development depending on the type and number of HGVs that may travel through it. A planning application should be accompanied by a Transport Assessment which assesses the scale of impact on the AQMA. A routeing strategy is unlikely to be able to avoid increasing HGV use of the M20.</p>						
4	Sustainable economic growth	Short	Med	Long	Prob	Dir/Ind	Rev?	
		++/-	++/-	0	H	D	N	
		<p>The site would make a contribution to the supply of soft sand as a material to support economic growth, although the use of non-renewable resources is a less sustainable route to growth than using recycled aggregate.</p>						
5	Flood risk	Short	Med	Long	Prob	Dir/Ind	Rev?	
		0	0	0	M	D	N	
		<p>The site does not lie within a flood zone. However, any planning application for an area greater than 1 hectare must be accompanied by a site-specific Flood Risk Assessment to demonstrate no adverse effect on flood risk and where practicable contribute to an overall reduction in flood risk.</p>						

6	Land	Short	Med	Long	Prob	Dir/Ind	Rev?	
		-	-	?	H	D	N	
<p>Agricultural Land Classification maps produced by Natural England show the land at the site to be grade 2 agricultural land. If the site is worked this will be lost for the duration of the works. The restoration of the site would be required to be sensitive to the agricultural afteruse of the site in accordance with Policy DM 19 restoration, Aftercare and After-use.</p>								
7	Landscape and the historic environment	Short	Med	Long	Prob	Dir/Ind	Rev?	
		-/?	-/?	?	M	D	N	
<p>The site lies within the setting of the Kent Downs AONB. The site and the proposed haul route is particularly prominent from the AONB to the north, including from an extensive tract of the North Downs Way national trail and other public rights of way and roads to the north of the A20. The site is an area of open landscape rising from Lenham Heath Road towards the A20. Although it is well screened from Lenham Heath Road to the south by dense hedges and trees, the other boundaries are in open farmland and this should require screening. The presence of minerals extraction within a hitherto unaffected site would be very likely to have an adverse effect upon landscape character locally due to loss of field boundaries; removal of vegetation cover; change in landform; the introduction of plant and equipment and the resultant change to the visual context of the landscape. Potential visibility from the higher land within the AONB to the north could also have indirect effects on character in that area. The Landscape and Visual Impact Assessment of the proposed site concludes that visual effects on local receptors would be significant but that visual impacts on the AONB would not be significant.</p> <p>There are listed properties close to the site, including the Grade II* Royton Manor, together with important archaeological remains of Royton Chapel which is Grade II listed, and other Grade II listed properties of Chapel Mill, and Mount Castle Farm to the north. To the south is the historic Park & Garden of Chilston Manor which is Grade I listed, but this is cut off from Lenham Heath Road and the site by the M20 and HS1 railway. The setting of these assets may be adversely affected by mineral operations, although a Cultural Heritage Appraisal in March 2018 concluded no significant adverse effects are likely. Any planning application must demonstrate no adverse impacts on these assets in accordance with Policy DM 5 Heritage Assets.</p> <p>The Lenham Conservation Area is remote from the site and local topography means the proposals should have little impact on it.</p>								

		Short	Med	Long	Prob	Dir/Ind	Rev?	
		?	?	0	M	D	N	
8	Transport	<p>It is proposed to construct a new junction on the A20 to access the site. A haul route will need to be constructed that can accommodate the necessary vehicle movements. It is proposed to work the site following completion of the nearby Lenham Quarry and that HGV movements will be no greater than existing. A planning application should be accompanied by a transport assessment that demonstrates the road network can accommodate the required vehicle movements safely and without detriment to the network, particularly considering cumulative impacts with proposed housing growth in the Lenham area in the Maidstone Borough Local Plan in accordance with Policy DM 13 Transportation of Minerals and Waste.</p>						
		Short	Med	Long	Prob	Dir/Ind	Rev?	
		-	-	-	M	D	N	
9	Water	<p>This site overlies the Folkestone Sands aquifer and is partly in a Source Protection Zone 3 for a public water abstraction borehole. Adverse impacts from mineral operations are not expected.</p> <p>Sewerage infrastructure crosses the site, and a wastewater treatment works is adjacent. Any planning application must be accompanied by adequate proposals to show the sewerage infrastructure can be diverted and the treatment works will remain operational.</p> <p>This site overlays a length of the River Stour at Lenham and adverse impacts from discharge, diversion of the watercourse or alteration of groundwater levels are possible. Any planning application must demonstrate that there will be no adverse impacts on the river and the hydraulic integrity of the river, its tributaries and aquifers will not be compromised in accordance with Policy DM 10 Water Resources.</p>						

Sustainability Objective		Comments					
1	Biodiversity	Short	Med	Long	Prob	Dir/Ind	Rev?
		--	--	--	M	D	N
		<p>The site is a grazing marsh, a priority habitat and a habitat of principal importance under the Natural Environment and Rural Communities Act. It currently supports a wide range of flora and fauna, including a number of rare plant species, important wintering and breeding bird populations and the most important water vole populations in the north-west of the county. It is of national importance for its aquatic macroinvertebrate assemblages and water vole populations. The development will result in the loss of this priority habitat and it is unlikely to be possible to recreate it, either elsewhere or on restoration. Development is also likely to have indirect impacts on the adjacent coastal saltmarsh and deciduous woodland priority habitats.</p> <p>The site overlaps Dartford Marshes Local Wildlife Site. Extraction should avoid this part of the site and any planning application should be accompanied by an assessment of the likely impacts on the LWS and appropriate mitigation to ensure no significant adverse effects on the site.</p>					
2	Climate change	Short	Med	Long	Prob	Dir/Ind	Rev?
		-	-	0	H	D	N
		<p>The site is a new site rather than a phased extension to existing workings and therefore will add to emissions from HGV movements and other site traffic and on-site processing. This will have a negative impact on climate change, albeit small when considered in terms of the emissions in the county as a whole.</p>					
3	Community and well-being	Short	Med	Long	Prob	Dir/Ind	Rev?
		-	-	0	H	D	Y
		<p>A large number of residential properties are located in close proximity to the site, including three and four-storey apartment blocks. Clear views of operations are likely to be available from these properties, and from the public</p>					

		<p>rights of way that run around the eastern and western boundaries of the site. It is unlikely that the adverse effects from such change in view could be adequately mitigated against, due to the height of property windows and the lower level of the site than the surrounding land.</p> <p>Extraction activity could be constrained by existing residential receptors on Wellcome Avenue (east) and Riverside Walk (west) which are sensitive to deposited dust and potentially noise, vibration, light and visual impacts. Mitigation should be employed in the form of dust suppression and appropriate bunds or planting in accordance with Policy DM 11 Health and Amenity.</p> <p>The bridleway to the east of the site and public footpath DB1 to the west should be retained for use with appropriate safety measures and screening. It is unlikely that views into the site from the paths and nearby residential properties can be mitigated.</p> <p>The promoted site area is part of the Dartford Borough Open Space (Policy CS14 and DP24) and is part of the strategic development site local plan designation. The intention is to retain the site as an area of undeveloped land within the overall strategic development designation. There will be a loss of this open space in the short and medium term, to be restored in the long term.</p> <p>There are three AQMAs in the vicinity of the site and air quality could be further reduced in these areas, either from site traffic or from other traffic trying to avoid congestion. An access and routeing plan should be developed to allow site traffic to avoid the AQMAs to reduce the risk of adverse health impacts, and a planning application should be accompanied by a detailed air quality assessment to demonstrate that the development can be accommodated on the road network without significant adverse effects on air quality to satisfy policy DM Health and Amenity.</p>							
4	Sustainable economic growth	Short	Med	Long	Prob	Dir/Ind	Rev?		
		++/-	++/-	0	H	D	N		
		<p>The site would make a contribution to the supply of sharp sand and gravel as a material to support economic growth, although the use of non-renewable resources is a less sustainable route to growth than using recycled aggregate.</p> <p>The site is identified in the Dartford Local Plan as part the Northern Gateway Strategic Site (Policy CS3). The promoted site area is also part of the Borough Open Space (Policy CS14 and DP24) that is part of the strategic</p>							

		development site local plan designation. The intention is to retain the site as an area of undeveloped land within the overall strategic development designation therefore the site would contribute to economic activity in the short and medium term and would not affect it in the long term.					
5	Flood risk	Short	Med	Long	Prob	Dir/Ind	Rev?
		?	?	?	L	D	N
		The site lies in flood zone 3. Any planning application must be accompanied by a site-specific Flood Risk Assessment to demonstrate no adverse effect on flood risk and where practicable contribute to an overall reduction in flood risk. The flood defences on the edge of the site should be retained and access allowed for maintenance. A planning application must demonstrate that the proposed operations will not compromise the flood defences in accordance with Policy DM 10 Water Environment.					
6	Land	Short	Med	Long	Prob	Dir/Ind	Rev?
		-	-	-	H	D	N
		Agricultural Land Classification maps produced by Natural England show the land at the site to be grade 2 and 3 agricultural land. If the site is worked this will be lost if restoration is proposed to be to wetland habitat.					
7	Landscape and the historic environment	Short	Med	Long	Prob	Dir/Ind	Rev?
		?	?	0	M	D	N
		The site lies within the Dartford Marshes Area of Archaeological Potential and a desk-based assessment has identified that the site has high archaeological potential. Extraction operations are likely to result in damage, disturbance or destruction. Any planning application must be accompanied by an assessment of the archaeological value of the site and a programme of investigation prior to any extraction taking place.					
8	Transport	Short	Med	Long	Prob	Dir/Ind	Rev?
		--	--	0	H	D	N
		The location is a strategically important part of the national road network. The County Council considers that even modest traffic increase will have potentially sizeable impacts on traffic conditions, particularly when viewed					

		cumulatively with other planned development in the Dartford Local Plan. The A282 frequently suffers major congestion which affects junction 1A interchange of the A282 and A206 (Bob Dunn Way) that then forms the approach to the Strategic Route Network (M25). Any planning application must be accompanied by a Transport Assessment that assesses the highway impacts of the proposed development and demonstrates that the road network will not be adversely affected by the development when considered in the context of other proposed development in the area to satisfy Policy DM 13 Transportation of Minerals and Waste.					
9	Water	Short	Med	Long	Prob	Dir/Ind	Rev?
		-	-	-	M	D	N
		The site overlies a chalk aquifer and is in SPZ2 for a public water abstraction borehole. A planning application must demonstrate that excavations will not affect the aquifer or its water quality and appropriate pollution control measures should be employed to satisfy Policy DM 10 Water Environment. The site is bounded in the west by the River Darent. A planning application must be accompanied by evidence to demonstrate that the hydrology and water quality of the river will not be affected by mineral extraction operations or restoration plans.					

Site M8: West Malling Sandpit

	Sustainability Objective	Comments					
1	Biodiversity	Short	Med	Long	Prob	Dir/Ind	Rev?
		--	--	--	M	D	N
		The area of ancient woodland to the south of the site must be avoided as it is an irreplaceable habitat. The planning application must assess the impacts of extraction on the ancient woodland, including through hydrological impacts, and provide mitigation to avoid impacts.					

		<p>The site contains acid grassland priority habitat that is very rare in Kent. Aerial photos indicate that the site is surrounded by mature hedgerows and there are hedgerows/mature trees within the site. Deciduous woodland priority habitat is located within the site. The acid grassland and vegetation within the site will be lost. There is the potential for a number of species to be present, including dormice, reptiles, great crested newts, bats and breeding birds. Any planning application must include ecological surveys to assess the impact the proposed development will have on protected/notable species and habitats. A restoration scheme must demonstrate that the completed site is replacing any habitat of ecological interest and enhancing the ecological interest of the site overall.</p> <p>The site is within the impact risk zone for Trottiscliffe Meadows SSSI which could be affected by changes to the hydrological regime. Any planning application must be accompanied by evidence to show that the hydrology of the SSSI will not be affected.</p> <p>The site is approximately 3km from North Downs Woodlands SAC and 6km from Peters Pit SAC. The Habitats Regulations Assessment has concluded that there are not likely to be significant adverse effects on these sites.</p>						
2	Climate change	Short	Med	Long	Prob	Dir/Ind	Rev?	
		-	-	0	H	D	N	
		<p>The site is a new site rather than a phased extension to existing workings and therefore will add to emissions from HGV movements and other site traffic and on-site processing. This will have a negative impact on climate change, albeit small when considered in terms of the emissions in the county as a whole.</p>						
3	Community and well-being	Short	Med	Long	Prob	Dir/Ind	Rev?	
		-	-	0	H	D	Y	
		<p>Two footpaths cross the site providing access to the AONB to the north. These footpaths should be diverted such that connectivity of the paths is maintained with appropriate screening and safety measures.</p> <p>Extraction activity could be constrained by existing receptors near to the site (residential, golf course, church) which are sensitive to deposited dust and potentially noise, vibration and visual impacts. Appropriate mitigation should be employed, potentially in the form of dust suppression and appropriate bunds or planting, and with some stand-off from properties. Any planning application should be accompanied by an assessment of the potential impacts on air quality, including from vehicle emissions to satisfy Policy</p>						

		<p>DM 11 Health and Amenity. There may be views of the site from paths near the site and from residential roads and properties. A landscape and visual assessment has been undertaken which concludes that the proposed development would have significant highly localised landscape and visual effects.</p> <p>Roughetts road is used by equestrians and an increase in HGV movements is likely to increase safety risks which needs to be mitigated, for example by allowing riders to use other paths in the area to avoid contact with vehicles.</p> <p>There is the potential for health impacts from inhaled silica dust. However, Public Health England advises that at sites which are well-managed and well-regulated and have appropriate control measures in place, concentrations of dust off-site remain below those associated with health impacts. Any planning application must be accompanied by information which demonstrates how dust will be controlled to acceptable levels.</p>						
4	Sustainable economic growth	Short	Med	Long	Prob	Dir/Ind	Rev?	
		++/-	++/-	0	H	D	N	
		<p>The site would make a contribution to the supply of soft sand (together with some non-aggregate industrial silica sand) as a material to support economic growth, although the use of non-renewable resources is a less sustainable route to growth than using recycled materials.</p>						
5	Flood risk	Short	Med	Long	Prob	Dir/Ind	Rev?	
		?	?	?	L	D	N	
		<p>The Environment Agency flood map shows the site to be located outside of flood risk areas, but this is believed to be incorrect and that the site is vulnerable to flooding and lies in flood zone 2 or 3. Any planning application must be accompanied by a site-specific Flood Risk Assessment to demonstrate no adverse effect on flood risk and where practicable contribute to an overall reduction in flood risk.</p>						
6	Land	Short	Med	Long	Prob	Dir/Ind	Rev?	
		-/?	-/?	-/0	M	D	N	
		<p>Agricultural Land Classification maps produced by Natural England show the land at the site to be grade 2 and 3 agricultural land. If the site is worked this will be temporarily lost. Restoration to agricultural land should be to the best and most versatile grade.</p>						

		The site is within the Metropolitan Green Belt. A planning application must provide evidence on the impact of operations on the Green Belt and justify why these do not constitute inappropriate development or constitute very special circumstances.					
7	Landscape and the historic environment	Short	Med	Long	Prob	Dir/Ind	Rev?
		-/?	-/?	?	M	D	Y/N
		<p>The site lies immediately adjacent to the southern boundary of the AONB and therefore within its setting. There may be views of the site from paths near the site and from residential roads and properties. A landscape and visual assessment has been undertaken which concludes that the proposed development would have significant highly localised landscape and visual effects that would not impact on the integrity of the surrounding landscape character and the proposed mitigation measures would considerably reduce potential visual effects. The assessment concludes that the proposed development would not be visible from the wider setting.</p> <p>With regards to restoration, it will be essential to ensure that views from the north are in keeping with the surrounding landscape character.</p> <p>The site is near to the Addington Conservation Area and to a scheduled monument and there are listed buildings nearby in East Street as well as a milestone on the corner of Roughetts Road and London Road. Any planning application should be required to demonstrate no adverse effects on these historic assets.</p> <p>The site lies within an area of archaeological importance and a desk and field assessment should be undertaken to assess the potential for the presence of assets of value within the site and a programme of excavation agreed and carried out before excavation commences.</p>					
8	Transport	Short	Med	Long	Prob	Dir/Ind	Rev?
		?	?	0/?	M	D	Y/N
		<p>There is the potential for the proposed site to create adverse impacts on the local highway network, although a Transport Assessment has been undertaken which concludes that the network has sufficient capacity and access can be provided. Excavations could affect the drainage, land or structure of the M20 at the northern edge of the site. Any planning application must be accompanied by a Transport Assessment that assesses the highway impacts of the proposed development and demonstrates</p>					

		that the road network will not be adversely affected by the development either through additional HGV movements or through structural damage, and that access can be safely accommodated.					
9	Water	Short	Med	Long	Prob	Dir/Ind	Rev?
		-	-	-	M	D	N
		The site overlies aquifers and is in a groundwater source protection zone 3 for public water abstraction boreholes. Development of the site could have adverse impacts on the source protection zone. A planning application must demonstrate that operations and restoration will not adversely affect the hydrogeological environment and that the aquifers (including the integrity of the Sandgate Formation) and the hydrological continuity of groundwaters and the Leybourne Stream to the south of the site will not be affected.					

Site M10: Moat Farm

	Sustainability Objective	Comments					
1	Biodiversity	Short	Med	Long	Prob	Dir/Ind	Rev?
		?/-	?/-	?	M	D	N
		Being predominantly arable fields surrounded by hedgerows and ditches, the site has the potential to support breeding and/or wintering birds, reptiles, great crested newts and water voles. The area of ancient woodland to the north of the site requires an appropriate buffer. Any planning application should be accompanied by evidence to demonstrate that appropriate mitigation can be implemented to avoid adverse impacts on protected/notable species and the ancient woodland.					
2	Climate change	Short	Med	Long	Prob	Dir/Ind	Rev?

		0	0	0	H	D	N	
		<p>The site is proposed as an extension to existing operations, with phasing to work this and the proposed Stonecastle Farm site (M13) sequential, such that they are not developed concurrently and with an extraction rate of 120,000 tonnes per annum as that which exists at the existing Stonecastle Farm Quarry site. The climate change impacts from HGVs and other vehicles accessing the site and on-site processing are likely to be unchanged from current emission levels.</p>						
3	Community and well-being	Short	Med	Long	Prob	Dir/Ind	Rev?	
		-	-	?/0	H	D	Y	
		<p>Footpaths cross the site which will be diverted during operations and possibly permanently. These footpaths should be diverted such that connectivity of the paths and safety is maintained.</p> <p>The nearest residential building is at Moat Farm and is approximately 170m from the site and which may be sensitive to deposited dust and potentially noise, vibration and visual impacts. Any planning application should assess the potential impacts on residential buildings and appropriate mitigation should be employed.</p> <p>A Landscape Assessment undertaken in 2001 concluded that the visual impact of operations will be limited to adjacent footpaths. These impacts must be mitigated by planting and use of bunds around the perimeter of the working. A second assessment of landscape and visual impact was undertaken in 2018 which concluded that effects on landscape character are unlikely to be significant other than on paths in the immediate vicinity and within the site itself. Views of the site are likely to be seen from residential properties although screening is possible and should avoid significant impacts.</p>						
4	Sustainable economic growth	Short	Med	Long	Prob	Dir/Ind	Rev?	
		++/-	++/-	0	H	D	N	
		<p>The site would make a contribution to the supply of sharp sand and gravel as a material to support economic growth, although the use of non-renewable resources is a less sustainable route to growth than using recycled aggregate.</p>						
5	Flood risk	Short	Med	Long	Prob	Dir/Ind	Rev?	
		?	?	?	L	D	N	

		The site lies in flood zone 3. Any planning application must be accompanied by a site-specific Flood Risk Assessment to demonstrate no adverse effect on flood risk and where practicable contribute to an overall reduction in flood risk.					
6	Land	Short	Med	Long	Prob	Dir/Ind	Rev?
		?	?	?	M	D	N/Y
		<p>Agricultural Land Classification maps produced by Natural England show the land at the site to be grade 3 agricultural land. A survey in 1998 found the land to be grade 3b. If the site is worked this will be lost, although grade 3b land is not considered to be in the category of best and most versatile. Restoration is to wetland habitat.</p> <p>The site is within the Metropolitan Green Belt. Any planning application would be required to provide evidence of the impact of operations on Green Belt objectives and the tests of what constitutes appropriate development in the Green Belt and justify why the proposed development would not constitute inappropriate development and if so that there are very special circumstances that justify the acceptability of the development.</p>					
7	Landscape and the historic environment	Short	Med	Long	Prob	Dir/Ind	Rev?
		-/?	-/?	0	M	D	Y/N
		<p>A Landscape Assessment undertaken in 2001 concluded that the visual impact of operations will be limited to adjacent footpaths. A second assessment of landscape and visual impact was undertaken in 2018 which concluded that effects on landscape character are unlikely to be significant other than on paths in the immediate vicinity and within the site itself.</p> <p>There is evidence of medieval activity outside the site to the north and west, but none within the site itself. A grade II listed building is immediately south of the site and another at Stonecastle Farm, but the listings reference the fabric of the building and not the setting, therefore significant impacts on the assets are not likely. Any planning application must be accompanied by an assessment of heritage assets in the vicinity of the site and demonstrate no significant adverse effects on the assets, particularly from vehicles accessing the site.</p>					
8	Transport	Short	Med	Long	Prob	Dir/Ind	Rev?
		0	0	0	H	D	Y

		<p>It is understood that access to the site will be via the existing purpose built access currently serving Stonecastle Farm Quarry onto the A228 to the east of the site. There is the potential for the proposed site to create adverse impacts on the local highway network and junction improvements may be required. However, a Transport Statement has been produced for Stonecastle Farm which has concluded that subject to some minor repairs and routine maintenance, the existing access to the sites is acceptable to accommodate the permitted and proposed operations at Stonecastle Farm Quarry, assuming the sites (Moat Farm and Stonecastle Farm) would be worked sequentially at the same 120,000 tonnes per annum as the existing Stonecastle Farm Quarry site. It also concluded that the junction with the A228 was acceptable and the developments would not result in an unacceptable impact on the road network or safety. Phasing of the works with the existing operations should ensure that no additional HGV movements are created on the road network.</p>					
9	Water	Short	Med	Long	Prob	Dir/Ind	Rev?
		-	-	-	M	D	N
		<p>The site overlies an aquifer and lies partially within groundwater source protection zone 3 for a public water borehole. The Alder Stream and smaller ditches run through the site. There is the potential for negative impacts on the aquifer, stream and ditches. Any planning application must be accompanied by a detailed assessment of the hydrological environment and the impacts of mineral working on it. This should include an assessment of the relationship to the previous, now flooded, excavations and should demonstrate how the restoration to wetland will preserve the integrity and function of the Alder Stream and drainage ditches on the site.</p>					

Site M11: Joyce Green Quarry

	Sustainability Obj	Comments					
1	Biodiversity	Short	Med	Long	Prob	Dir/Ind	Rev?
		0	--	--	H	D	N

		<p>The site is important for a number of protected/notable species (water vole, ditch vegetation, aquatic invertebrates, bats, reptiles, breeding and wintering birds). It is proposed to retain the overall pattern of ditches though there will be loss of some of the ditches during operations. Ditches would be re-created as part of the proposed mineral extraction and restoration activities but overall there will be a net loss of ditches. Therefore, species/populations could be significantly affected during this loss and recreation of habitat process. Any biodiversity gain is unlikely to be a significant benefit for species affected by the temporary habitat losses and overall disturbance potential prior to eventual restoration. The ecologically sensitive restoration proposed leaves doubt that it can be implemented with a high probability of success, in part because the nature of the imported material to create habitats is unknown in terms of the impact on the hydrology of the site and thus potential changes to the habitat of the drainage ditches.</p> <p>The site falls into the Impact Risk Zone (IRZ) Goose & Swan Functional Land for the nearby Inner Thames Marsh and Purfleet Chalk Farm SSSIs and Important Bird Areas Thames Estuary And Marshes (designated by Birdlife International). The site also forms Green Corridor No 12 of Bexley's 14 Designated Strategic Green Corridors "River Darent corridor" of which Dartford Marshes is a part. The site lies in a Biodiversity Opportunity Area where Dartford's Development Plan policies require particular focus to be given to enhancing biodiversity.</p> <p>The site contains two priority habitats: coastal floodplain and grazing marsh; and hedgerows. In addition, the grassland has an affinity with other grassland priority habitats. The proposed site forms part of the Dartford Marshes Local Wildlife Site which is expected to be lost during the operations. All of these biodiversity assets are likely to be significantly negatively affected by the proposed operations and habitats will be lost. Restoration is proposed to be progressive with extraction and to be ecologically sensitive to incur no net loss of habitat overall. However, there is doubt that the proposed restoration plan is implementable to achieve the habitat reinstatement objective and therefore there is no certainty that negative impacts can be fully mitigated.</p>						
2	Climate change	Short 0	Med -	Long -	Prob H	Dir/Ind D	Rev? N	<p>The site is proposed as a phased extension to existing operations once the existing permitted reserves have been extracted and processed for market, although the number of vehicle movements is expected to double. The climate change impacts from HGVs and other vehicles accessing the site and on-site processing are likely to increase.</p>
3		Short	Med	Long	Prob	Dir/Ind	Rev?	

	Community and well-being	0	-	0	H/L	D	Y/N	
<p>Footpaths run along the site boundary to the west, east and southwest of the site, including the Darent Valley Path, the London Loop and the Thames Path, promoted as recreational paths. The Darent Valley Footpath runs along the top of the flood embankment to the west of the site. Users of these paths will see the site across the large open landscape. Screening will be provided but the site will still be visible from the path on the embankment, although the proposed development will not divert the paths. Users of roads in the vicinity may have glimpsed or distant views of the site and residents in Oaks Road to the west may see the site from upper windows. Mitigation should be provided in the form of retained and enhanced vegetation and bunds which will minimise most impacts, although not for users of the path along the raised earth banks which could potentially be significant and adverse impacts for those users.</p> <p>The site is designated as Borough Open Space in the Dartford Development Policies Plan 2017. This open space will be lost in the medium term with a loss of amenity, but restoration will be to open space therefore in the long term the effect will be neutral.</p> <p>There are residential dwellings to the east, at least 450m from the proposed extension, and to the west at least 650m from the proposed extension. An assessment of the expected noise levels has indicated very low levels of noise for these receptors. At this distance, properties are unlikely to be affected by dust. There are a small number of properties on Joyce Green Lane which could potentially experience adverse amenity effects from vehicles accessing the site.</p> <p>The proposed site is located near to four AQMAs (Dartford 1, 2 and 3 and an AQMA in Bexley) and operations at the site have the potential to further reduce air quality in these AQMAs due to vehicle exhaust emissions. There is the potential for air quality impacts as a result of vehicle exhaust emissions and dust emissions which could create both amenity and health effects. Any planning application must be accompanied by a detailed assessment of air quality impacts which demonstrates no significant adverse effects from dust and vehicle exhaust emissions. Mitigation will be required to reduce the level of these emissions. Vehicles accessing and leaving the site would use the A206 either east or west of Joyce Green Lane. If vehicles travel to or from the west, they will pass through Dartford AQMA 3 and possibly also the Bexley AQMA. Travelling to and from the east, they are likely to pass through Dartford AQMA 1 and/or Dartford AQMA2. However, it is understood that the site is proposed as a phased extension to existing operations once the existing permitted reserves have been extracted and processed for market and that there will be no additional</p>								

		HGV movements. Any planning application must be accompanied by an assessment of air quality impacts from HGVs and other traffic accessing the site, particularly on areas of poor air quality to satisfy Policy DM 11 in the KWMLP.					
4	Sustainable economic growth	Short	Med	Long	Prob	Dir/Ind	Rev?
		0	++/-	0	H	D	N
		The site would make a contribution to the supply of flint sand and gravel as a material to support economic growth, although the use of non-renewable resources is a less sustainable route to growth than using recycled aggregate.					
5	Flood risk	Short	Med	Long	Prob	Dir/Ind	Rev?
		0	?	?	L	D	N
		The site lies in flood zone 3 and benefits from existing flood defences. Any planning application must be accompanied by a site-specific Flood Risk Assessment to demonstrate no adverse effect on flood risk and where practicable contribute to an overall reduction in flood risk. The FRA should also assess the potential effects on the flood defences and mitigation must be included to ensure Environment Agency staff can access the defences for maintenance.					
6	Land	Short	Med	Long	Prob	Dir/Ind	Rev?
		0	?	?	M	D	N/Y
		Agricultural Land Classification maps produced by Natural England show the land at the site to be grade 3 agricultural land, possibly lower quality grade 3 land, which would be lost to development. The restoration of the site would be required to be sensitive to the agricultural afteruse of the site in accordance with Policy DM 19 restoration, Aftercare and After-use.					
		The site is within the Metropolitan Green Belt. A planning application would be required to provide evidence of the impact of operations on Green Belt objectives and the tests of what constitutes appropriate development in the Green Belt and justify why the proposed development would not constitute inappropriate development and if so that there are very special circumstances that justify the acceptability of the development in this case.					
7		Short	Med	Long	Prob	Dir/Ind	Rev?
		0	?	?	M	D	Y/N

	Landscape and the historic environment	<p>A desk-based archaeological assessment has been prepared by the promoters of the site and has been assessed as inadequate. There is potential for significant multi-period and palaeo-environmental remains to survive on the site. Any planning application will need to be accompanied by a full assessment of the archaeological value of the site, including a multi-phased programme would need to include palaeo-environmental and geoarchaeological assessment and assessment of historic landscape features as well as regular broad ranged heritage assessment to satisfy Policy DM 6 Historic Environment Assessment.</p> <p>The nearest listed building is a coal marker at approximately 480m. No impacts are likely to listed buildings.</p>						
8	Transport	Short	Med	Long	Prob	Dir/Ind	Rev?	
		0	--	0	H	D	Y	
		<p>The site has the potential to exacerbate traffic congestion on the A206 and at junction 1A approach to the M25 which already experience significant congestion at times. This in turn affects the local road network as traffic seeks to avoid congestion on the M25/A282. The need to import an equal amount of inert restoration fill material in addition to the HGV movements associated with the mineral extraction will increase HGV movements to 120 per day.</p> <p>Joyce Green Lane is an unclassified rural lane and may be unsuitable for HGV movements and may require upgrading.</p>						
9	Water	Short	Med	Long	Prob	Dir/Ind	Rev?	
		0	--	--	M	D	N	
		<p>The southern part of the site is in a groundwater source protection zone 3. The site is also within Major Aquifer High Groundwater Vulnerability Zone. Mineral extraction and creation of a lake will cause a significant change to the local hydrology relative to the existing network of drains and ditches that constitutes the Marsh. This has the potential to cause significant change to the hydrology of the Dartford Marshes which could have significant adverse effects on its functioning and the species and habitats it supports. Any planning application should provide detailed evidence to show that excavation will not significantly change the hydrology of the marsh, adverse effects on habitats and species can be avoided and groundwater will not be affected. Evidence should be provided to show how brackish/saline ingress will be managed.</p>						

Site M12: Postern Meadows

Page 528

Sustainability Objective		Comments					
1	Biodiversity	Short	Med	Long	Prob	Dir/Ind	Rev?
		-/+	-/+	-	M	D	N
		<p>Part of the site is adjacent to East Tonbridge Copses and Dykes River Medway Local Wildlife Site designated for wetland features and of county importance. Any planning application must be accompanied by an assessment of the impacts of the proposed development on the LWS, including from discharge to groundwater, dust and other discharges falling into the site and noise impacts on wildlife. Appropriate mitigation must be proposed which demonstrates that significant adverse impacts will be avoided.</p> <p>The site is two fields of grassland with mature trees/running between the two and surrounded by mature trees/hedgerows and the Medway and Botany Stream run along the Northern and Eastern boundary.</p> <p>Part of the northern edge and all the eastern edge of the site lie within an area subject to Adopted Tonbridge and Malling Managing Development and the Environment Development Plan Document policy NE1 Local Sites of Wildlife, Geological and Geomorphological Interest. There will be a need for ecological survey(s) to be carried out as part of any planning application and the restoration scheme must demonstrate that the restored site would provide ecological enhancements and enhance the habitat adjacent to the LWS.</p> <p>The proposed site includes areas of priority habitat. Development will result in a partial loss of Traditional Orchard priority habitat and may potentially have indirect impacts to Deciduous Woodland priority habitat and an area of ancient woodland 190m to the east.</p> <p>There are records of Himalayan Balsam and Mink in the area. Operations at the site should not contribute to the spread of these species and where practical the developer should contribute to management of these invasive non-native species as part of their work at the site.</p>					

2	Climate change	Short	Med	Long	Prob	Dir/Ind	Rev?	
		-	-	0	H	D	N	
<p>The site is a new site rather than a phased extension to existing workings and therefore will add to emissions from HGV movements and other site traffic and on-site processing. This will have a negative impact on climate change, albeit small when considered in terms of the emissions in the county as a whole.</p>								
3	Community and well-being	Short	Med	Long	Prob	Dir/Ind	Rev?	
		-	-	0	M	D	Y	
<p>The site has areas that are proximate to the defined built up area of Tonbridge and the Postern Bridge Cottages area. The health and amenity of these properties could be affected by the extraction and processing of aggregates, including from noise, dust, vibration, light, visual amenity and drowning risk. Any planning application must be accompanied by an assessment of the likely impacts of operations and restoration on health and amenity and mitigation must be provided to demonstrate that impacts can be managed to acceptable levels.</p> <p>A transport routing strategy should be designed to avoid the Tonbridge AQMA to avoid adverse impacts on an area of poor air quality.</p> <p>Footpath MU33 runs adjacent to the southern boundary of the site. Footpaths MU32 and MU34 are both within 90m of the site. Wealdway and Medway Valley Walk lies within 90m of the site. Footpath MU33 is currently well screened, however views of activities at the site are likely to be available from nearby public rights of way on Postern Lane to the south, and along the banks of the Medway to the north and west. Mitigation of the landscape and visual impact effect should include retention of boundary vegetation, additional planting and the creation of bunds to ensure significant negative impacts are avoided.</p>								
4	Sustainable economic growth	Short	Med	Long	Prob	Dir/Ind	Rev?	
		++/-	++/-	0	H	D	N	
<p>The site would make a contribution to the supply of sharp sand and gravel as a material to support economic growth, although the use of non-renewable resources is a less sustainable route to growth than using recycled aggregate.</p>								
5	Flood risk	Short	Med	Long	Prob	Dir/Ind	Rev?	

		?	?	?	L	D	N	
		The site lies in flood zone 3. Any planning application must be accompanied by a site-specific Flood Risk Assessment to demonstrate no adverse effect on flood risk and where practicable contribute to an overall reduction in flood risk.						
6	Land	Short	Med	Long	Prob	Dir/Ind	Rev?	
		?	?	?/0	L/M	D	N/Y	
		Agricultural Land Classification maps produced by Natural England show the land at the site to be grade 3 agricultural land. If the site is worked this will be lost, which would be significant if the land were grade 3a, which is unknown at this stage. Restoration is to open water.						
		The site is within the Metropolitan Green Belt. A planning application must provide evidence on the impact of operations on the Green Belt and justify why these do not constitute inappropriate development affecting openness or constitute very special circumstances.						
7	Landscape and the historic environment	Short	Med	Long	Prob	Dir/Ind	Rev?	
		-/?	-/?	0/?	L	D	Y/N	
		The site lies close to the High Weald AONB. Whilst located only approximately 1km from the boundary of the AONB, the site would be separated from the designation by intervening urban and industrial development immediately to the south. Operations at the site are unlikely to materially affect the statutory purposes and special qualities of the High Weald AONB						
		Working at the site would extend the developed area into a more rural area, resulting in significant changes to the landscape character locally. The site would also be visible from the nearby Postern Bridge Cottage resulting in significant adverse effects for residents of the property. Views of activities at the site are also likely to be available from nearby public rights of way on Postern Lane to the south, and along the banks of the Medway to the north and west. Mitigation of the landscape and visual impact effect should include retention of boundary vegetation, additional planting and the creation of bunds.						
		There are two grade II listed buildings and one grade II* listed building on Postern Lane. The nearest is 325m to the south east on Postern Lane and therefore adverse effects on these assets are unlikely. The Central Tonbridge Conservation Area could potentially be affected by HGV movements generated by the development. A transport routeing strategy should be provided alongside any						

		<p>planning application to show that the Conservation Area will be avoided.</p> <p>The deposits within this site do have potential for early prehistoric remains. Earlier extraction to the east has revealed remains of timber structures and a possible Saxon mill, demonstrating the potential for evidence of later prehistoric and later use and management of the water channels.</p> <p>Any planning application must be accompanied by an assessment of the archaeological value of the site, with a multi-phased programme of both desk based and field work, with mitigation fully informed and appropriate to the significance of the heritage assets affected. The multi-phased programme would need to include palaeo-environmental and geoarchaeological assessment as well as regular broad ranged heritage assessment.</p>					
8	Transport	Short	Med	Long	Prob	Dir/Ind	Rev?
		-	-	0	M	D	Y
		<p>Access is via Postern Lane on which there is a public right of way. The junction with Vale Road is a simple priority junction and scope for improvements is limited due to the river bridge immediately to the north of the site access. Vale Road and adjoining highway network is already congested at peak times therefore any significant level of intensification is likely to create significant adverse impacts on the local road network. Postern Lane also meets the B2017 Tudeley Road where there is limited forward visibility at the junction. Any intensification of use would require junction improvements. Hartlake Road to the east is a narrow lane and use by HGVs would have adverse impacts. A Transport Assessment will be required to demonstrate that the predicted generation of HGV movements can safely be accommodated on the road network without unacceptable adverse impacts on congestion.</p>					
9	Water	Short	Med	Long	Prob	Dir/Ind	Rev?
		-	-	-	M	D	N
		<p>There is existing sewerage infrastructure crossing the site. This must be protected or diverted to ensure the infrastructure is not adversely affected.</p> <p>The site is in a groundwater Source Protection Zone 3 and a minor aquifer in a High Groundwater Vulnerability Zone. Any planning application must demonstrate that operations at the site and following restoration will not have adverse effects on the aquifer.</p>					

Site M13: Stonecastle Farm Quarry Extension

Page 532

	Sustainability Objective	Comments						
		Short	Med	Long	Prob	Dir/Ind	Rev?	
		-/+	-/+	-/0	M	D	N	
1	Biodiversity	<p>The site is adjacent to the East Tonbridge Copses and Dykes and River Medway Local Wildlife Site designated for wetland features and of county importance. Any planning application must be accompanied by an assessment of the impacts of the proposed development on the LWS, including from discharge to groundwater, dust and other discharges falling into the site and noise impacts on wildlife. Appropriate mitigation must be proposed which demonstrates that significant adverse impacts will be avoided. This is likely to include an appropriate buffer and hydrological monitoring to ensure the LWS is not affected.</p> <p>The southern part of the side is adjacent to ancient woodland and there is the potential for operations to adversely affect the woodland. Mitigation must be provided to prevent adverse effects, which could include provision of a suitable buffer, hydrological monitoring and noise, dust and lighting measures.</p> <p>The site is a large arable field with hedgerows within and surrounding the site, and with a block of woodland within the site. There is a block of deciduous woodland priority habitat within the site which will be lost. There is another area of deciduous woodland priority habitat adjacent to the site which may be indirectly adversely affected. The habitats within or adjacent to the site have potential to contain protected/notable species including bats, badgers, dormice, otters, harvest mice, reptiles, invertebrates, brown hare, greate crested newts and wintering/breeding birds. Habitat within the site will be lost with a consequent negative impact on biodiversity value. There will be a need for ecological survey(s) to be carried out. Any planning application must be accompanied by ecological surveys of the biodiversity value of the site and restoration should replace and enhance the ecological interest of the site and where possible benefit the LWS.</p> <p>There are records of Nuttall's pondweed and Crassula in the area. Operations at the site should not contribute to the spread of</p>						

		these species and where practical the developer should contribute to management of these invasive non-native species as part of their work at the site.						
2	Climate change	Short	Med	Long	Prob	Dir/Ind	Rev?	
		0	0	0	H	D	N	
		The site is proposed as an extension to existing operations, with phasing to work this and the proposed Moat Farm site (M10) to be sequential. Therefore there would be no concurrency of operations at Moat Farm or Stonecastle Farm therefore extraction would be at the same rate of mineral extraction of 120,000 tonnes per annum (the same as the existing Stonecastle Farm Quarry site). The climate change impacts from HGVs and other vehicles accessing the site and on-site processing are likely to be unchanged from current levels.						
3	Community and well-being	Short	Med	Long	Prob	Dir/Ind	Rev?	
		0	0	0	H	D	Y	
		The proposed site is unlikely to have significant impacts on health and wellbeing from dust, noise, visual amenity, light, vibration or drowning. The nearest properties are 230m from the site and screened by woodland. The Medway Valley Walk long distance path is located north of the site but at close range views are prevented by mature woodland. There is a public right of way WT168 which crosses Tarmac land beyond the limits of extraction and this will be retained throughout. The publicly accessible visual receptors in this area with views towards the site are a limited section of Hartlake Road and the nearby public footpath. The Medway Valley Walk long distance path is located north of the site but at close range views are prevented by mature woodland. It is unlikely that there would be significant effects on residential properties given the distance from the site, or on users of the paths if the boundary vegetation is retained.						
4	Sustainable economic growth	Short	Med	Long	Prob	Dir/Ind	Rev?	
		++/-	++/-	0	H	D	N	
		The site would make a contribution to the supply of sharp sand and gravel as a material to support economic growth, although the use of non-renewable resources is a less sustainable route to growth than using recycled aggregate.						

5	Flood risk	Short	Med	Long	Prob	Dir/Ind	Rev?	
		?	?	?	L	D	N	
		The site lies in flood zone 3. Any planning application must be accompanied by a site-specific Flood Risk Assessment to demonstrate no adverse effect on flood risk and where practicable contribute to an overall reduction in flood risk.						
6	Land	Short	Med	Long	Prob	Dir/Ind	Rev?	
		0/?	0/?	0	H	D	N	
		Agricultural Land Classification maps produced by Natural England show the land at the site to be grade 3 agricultural land. A survey carried out in 1998 showed 81% of the land to be grade 3b and the remainder grade 2 and 3a. If the site is worked this will be lost, but as the soil is mostly grade 3b, this is not a significant adverse effect. Restoration is to landscaped lakes.						
		The site is within the Green Belt. A planning application would be required to provide evidence of the impact of operations on Green Belt objectives and the tests of what constitutes appropriate development in the Green Belt and justify why the proposed development would not constitute inappropriate development and if so that there are very special circumstances that justify the acceptability of the development in this case.						
7	Landscape and the historic environment	Short	Med	Long	Prob	Dir/Ind	Rev?	
		?	?	?	M	D	Y	
		The proposed allocation lies 1.5km from the High Weald AONB but will be well-screened from the AONB if boundary vegetation is retained. However, there may be filtered views from the AONB in winter. depending on the location of the fixed plant.						
		There is a grade II listed building close to the site access, although with proposals to extract at 120,000 tonnes as existing, impacts from HGVs on this asset will be no more than current impacts. There are three grade II listings associated with Hartlake Farm to the north of the site but these are screened by dense woodland and therefore significant impacts are unlikely.						
		The deposits within this site do have potential for early prehistoric remains. Earlier extraction to the east has revealed remains of timber structures and a possible Saxon mill, demonstrating the potential for evidence of later prehistoric and later use and management of the water channels. A number of WWII defensive sites are located along the Medway to the north and features						

		associated with these may fall within the proposed site. However, an assessment of archaeological and heritage value of the site has concluded that the site has low potential for recovery of archaeological remains and that there are no significant impacts on designated or undesignated assets.					
8	Transport	Short	Med	Long	Prob	Dir/Ind	Rev?
		0	0	0	H	D	Y
		A Transport Statement has been produced which has concluded that subject to some minor repairs and routine maintenance, the existing access to the site is acceptable to accommodate the proposed operations at Stonecastle Farm Quarry, assuming the sites (both Moat farm and Stonecastle Farm) would be worked sequentially and not concurrently, at the same extraction rate of 120,000 tonnes per annum as the existing permitted Stonecastle Farm Quarry site. It also concluded that the junction with the A228 was acceptable and the developments would not result in an unacceptable impact on the road network or safety.					
9	Water	Short	Med	Long	Prob	Dir/Ind	Rev?
		-/?	-/?	-/?	M	D	N
		<p>The proposed site extends into groundwater Source Protection Zones 1, 2 and 3 in an area important for local water supply. Further major extensions to the quarry may adversely impact water supply options. South East Water have concerns about potential impacts on groundwater quantity and quality.</p> <p>A hydrological and hydrogeological appraisal has been undertaken of the potential impacts of the existing consented site which concluded adverse effects on groundwater flow and quality (this assessment accounting for the ameliorating effects of the alteration of the mode of mineral extraction from dry to wet working) and those associated with any future mineral workings within the Potential Allocation Area. The appraisal proposes mitigation measures that enables it to conclude that there are no over-riding hydrogeologically or hydrologically based reasons why the planned development should not proceed in the manner described.</p> <p>Plans for restoration should assess the proposed interface between the lakes and the adjoining River Medway, the Hammer Dyke and associated drains. Given that Stonecastle Farm is predominantly underlain by Weald Clay Formation there is some uncertainty as to how sustainable the restoration plan is, independent of a feed from any one of the watercourses that will bound the lakes,</p>					

		once the mineral has been extracted. The restoration plan will need to include evidence demonstrating as to how the integrity of those watercourses sited on the curtilage of the workings will be retained.
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Appendix E: Detailed Findings and Recommendations of SA of Alternatives to Land-Won Aggregates

Key:

Impacts	Probability of effects	Direct or indirect effects	Reversibility
++ significant positive effect	L low probability	D direct effect	Y reversible effect
+ some positive effect	M medium probability	I indirect effect	N not reversible i.e. permanent effect
0 no effect	H high probability		
- some adverse effect			
-- significant adverse effect			
? uncertain effect			

Page 537

	Sustainability Objective	Comments					
		Short	Med	Long	Prob	Dir/Ind	Rev?
		-/?	-/?	?	L	I	N
1	Biodiversity	<p>The increased supply of marine-dredged aggregates (MDA), secondary and recycled aggregates and land-won aggregates from outside of Kent will help to reduce the potential negative impacts on biodiversity associated with proposed site allocations, although some negative impacts from some land-won aggregate sites are still likely. The scale of the benefits will depend on which sites are replaced by the supply of alternatives. Opportunities will for habitat improvement and improved access through restoration will be lost, although the loss of this benefit is unlikely to be significant. There may be biodiversity impacts associated with transport of alternative aggregates, but this is unlikely to be significantly different from that associated with land-won aggregates. MDA may have adverse effects on marine biodiversity, but the likelihood and significance of any effects is unknown. Import of land-won aggregates from outside</p>					

		of Kent may have biodiversity impacts where the aggregates are extracted but the likelihood and significance of impacts are unknown.					
2	Climate change	Short	Med	Long	Prob	Dir/Ind	Rev?
		0/+	0/+	0/+	H	D	N
		<p>There will be climate change impacts associated with the energy requirements for processing and transport of secondary and recycled aggregates and MDA, although these are not likely to be significantly different from the processing and transport of land-won aggregates. Two of the wharves safeguarded in the KMWLP and some of the recycled aggregate processing sites are connected to the rail network which may help to reduce the climate change impacts of road transport to a small degree.</p> <p>The import of land-won aggregates from outside of Kent is likely to be by bulk transport to be economic and therefore is likely to be transported by rail and through wharves. The climate change effects of this bulk transport are uncertain as this will depend on the distance the material has travelled which is not known. Once imported into Kent these land-won aggregates are likely to involve road transport with associated climate change effects, although the effects are not likely to be significantly different from the transport of land-won aggregates from sites in Kent.</p>					
3	Community and well-being	Short	Med	Long	Prob	Dir/Ind	Rev?
		+/?	+/?	+/?	L	D/I	Y
		<p>The increased supply of secondary and recycled aggregates and MDA and import of land-won aggregates from outside of Kent are unlikely to have a significant impact on communities, although it will contribute to ensuring the supply of aggregates to support construction. There may be some scope to transport aggregates from safeguarded wharves by rail and recycled aggregates from safeguarded rail depots, which will help to reduce the potential for adverse impacts on air quality from road transport, although the scale and significance of this will depend on which land-won sites would be replaced by alternative aggregate supply. Import of land-won aggregates from outside of Kent may have impacts on communities and wellbeing where the aggregates are extracted but the likelihood and significance of impacts are unknown.</p>					

4	Sustainable economic growth	Short	Med	Long	Prob	Dir/Ind	Rev?	
		++/-	++/-	++/-	H	D	N	
		<p>The increased supply of secondary and recycled aggregates and MDA and import of land-won aggregates from outside of Kent would make a contribution to the supply of aggregates as a material to support economic growth. The use of secondary and recycled aggregates avoids the use of non-renewable resources and therefore constitutes a more sustainable route to growth. MDA and land-won aggregates from outside of Kent are non-renewable resources and their use is not a sustainable route to growth.</p>						
5	Flood risk	Short	Med	Long	Prob	Dir/Ind	Rev?	
		0/?	0/?	0/?	H/L	I	Y	
		<p>The increased supply of secondary and recycled aggregates and MDA will have no significant impact on flood risk. It may help to avoid the need for land-won minerals sites in flood risk zones, but the scale of benefits is not known at this stage. Import of land-won aggregates from outside of Kent may have implications for flood risk where the aggregates are extracted but the likelihood and significance of impacts are unknown.</p>						
6	Land	Short	Med	Long	Prob	Dir/Ind	Rev?	
		0/?	0/?	0/?	L	I	Y	
		<p>The increased supply of secondary and recycled aggregates and MDA will have no significant impact on land use, although it would help to avoid the loss of best and most valuable agricultural land to land-won sites and help to avoid mineral development in the Green Belt although some negative impacts from some land-won aggregate sites are still possible. The likelihood and scale of those benefits will depend on which land-won sites would be replaced by alternative aggregate supply which is unknown. The impact on land from extraction of land-won aggregates from outside of Kent depends on the sites from where the aggregates originate, which is unknown.</p>						
7	Landscape and the historic environment	Short	Med	Long	Prob	Dir/Ind	Rev?	
		0/?	0/?	0/?	L	I	Y	

		<p>The increased supply of secondary and recycled aggregates and MDA is unlikely to have any significant impact on landscape and the historic environment, although it would help to avoid negative impacts associated with land-won mineral sites although these are not considered to be significant. The likelihood and scale of those benefits will depend on which land-won sites would be replaced by alternative aggregate supply which is unknown at this stage. The impact on land from extraction of land-won aggregates from outside of Kent depends on the sites from where the aggregates originate, which is unknown.</p>					
8	Transport	Short	Med	Long	Prob	Dir/Ind	Rev?
		+/?	+/?	+/?	L	I	Y
		<p>The increased supply of MDA may have a slight benefit in facilitating the transport of some aggregates by rail as two of the wharves safeguarded in the KMWLP are connected to the rail network. The supply of recycled aggregates could also help to promote alternatives to road transport as several of the processing sites are rail-connected. The likely proportion of either MDA or recycled aggregates transported by rail is unknown and therefore the significance of any benefits is also unknown.</p> <p>The import of land-won aggregates from outside of Kent is likely to be by bulk transport to be economic and therefore is likely to be transported by rail and through wharves which is a more sustainable mode than road. Once imported into Kent these land-won aggregates are likely to involve road transport, although the effects may not be significantly different from the transport of land-won aggregates from sites in Kent.</p>					
9	Water	Short	Med	Long	Prob	Dir/Ind	Rev?
		0/-	0/-	0/?	L	I	Y
		<p>The increased supply of secondary and recycled aggregates and MDA will have no significant impact on water quality or quantity. However, it may help to avoid the need for land-won minerals sites with potential adverse impacts on hydrology/hydrogeology and water quality, although some negative impacts from some land-won aggregate sites are still possible. The likelihood and significance of benefits depends on which land-won sites would be replaced which is</p>					

		not known at this stage. Import of land-won aggregates from outside of Kent may have effects on water quality and quantity where the aggregates are extracted but the likelihood and significance of impacts are unknown.
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Appendix F: Contribution of Other Plans and Strategies to Cumulative Effects

Shepway Core Strategy Local Plan, Shepway District Council, September 2013

There is a target for construction of 400 dwellings per year to 2026 and to deliver an average of approximately 1 hectare per year (to 2026) of office/industrial premises.

Business activity and the provision of jobs will be facilitated through supporting town centres, the protection of sufficient employment land across the district, allocations and concerted efforts to deliver rural regeneration (especially in south and west Shepway).

The Plan seeks to accommodate new retail, leisure and an improved public environment at Folkestone, Hythe and New Romney town centres. The majority of Shepway's commercial floorspace and the majority of the urban area's housing development will take place in Folkestone, to enhance its role as a sub-regional centre.

The Plan seeks to regenerate Romney Marsh through a positive approach to sustainable economic development and infrastructure opportunities, and through increasing the strategic role of New Romney town in serving the area. The future spatial priority for new development in the Romney Marsh area is on accommodating development at the towns of New Romney and Lydd and at sustainable villages, improving communication, and on protecting and enhancing the coast and the many special habitats and landscapes, especially at Dungeness.

The strategic growth of New Romney is supported to allow the market town to fulfill its potential to sustainably provide for the bulk of the housing, community infrastructure and commercial needs of the Romney Marsh Area. Development will also be planned at other identified settlements in line with the Settlement Hierarchy sufficient to ensure the achievement of growth requirements. In particular, development which helps to maintain and support the local role of the market town of Lydd, and rural centres including Sellindge, can meet priority needs.

New Romney is defined as a Strategic Town, to accommodate significant development – in so far as consistent with maintaining historic character – appropriate to the needs of its wider hinterland in Shepway, and maintaining the viability of its local transport hub, town centre and higher-order tourism, employment and public services. It is expected to be suitable for expansion from its current built limit. The town centre will accommodate the majority of the identified needs for retail, office and leisure uses through new development to improve its vitality, public realm, mix of uses, and daytime and evening economy.

New Romney should develop as the residential, business, service, retail and tourist centre for the Romney Marsh. The future development of the town should seek to support the retention of existing businesses and the attraction of new employment opportunities through the provision of an adequate supply of employment land to meet future need and through the provision of a sufficient level of new residential development to maintain an adequate labour supply.

There is a broad location for residential development to the north of the town centre, to provide around 300 dwellings (Class C3). Appropriate off-site mitigation measures must be identified, including to ameliorate highway impacts and manage drainage demands.

A site at New Romney is identified as appropriate as a Major Employment Site, to protect existing and provide further industrial premises suitable to the needs of Shepway's businesses and inward investors.

The junction of A259/B2071/ Church Road junction is identified as strategically critical infrastructure for improvement by 2026. Hammonds Corner west of New Romney A259/ B2075 junction improvement is identified as important, potentially necessary infrastructure to help deliver the Core Strategy.

Lydd is identified as a Service Centre, to accommodate development appropriate to Shepway and its own needs, in order to grow and consolidate its position as a District Centre serving the local hinterland with shops, employment and public services. Lydd has played a significant role in the district's development and includes some significant opportunities, but they should be delivered without a substantial expansion of the outer extent of its built environment. It will accommodate appropriate development to maintain its mix of uses and improve its vitality, viability and public realm.

There are sites in Lydd appropriate as Major Employment Sites, to protect existing and provide further industrial (B-class and similar sui generis uses) premises suitable to the needs of Shepway's businesses and inward investors.

Dymchurch is identified as a Rural Centre, to develop – consistent with enhancing the natural and historic environment – in a manner that supports its role as an integrated tourist and local centre providing shops and services for a significant number of residents, visitors, and also for other villages in Romney Marsh. The aim is to protect crucial services and accommodate development that maintains its viability for residents and visitors.

St Mary's Bay, Greatstone-on-Sea, Brookland and Brenzett are identified as Primary Villages, to contribute to strategic aims and local needs; and as settlements with the potential to grow and serve residents, visitors and neighbourhoods in the locality with rural business and community facilities.

Connections to existing ports and airports within and outside the district will be promoted, such as by new rail and coach services, and to support improved access to London Ashford (Lydd) Airport subject to no adverse environmental consequences.

Lydd is identified as a Green Infrastructure (GI) Fringe Zone. Green infrastructure will be protected and enhanced and the loss of GI uses will not be allowed, other than where demonstrated to be in full accordance with national policy, or a significant quantitative or qualitative net GI benefit is realised or it is clearly demonstrated that the aims of this strategy are furthered and outweigh its impact on GI. Shepway's GI network and other strategic open space will be managed with a focus on:

- Adapting to and managing climate change effects;
- Protecting and enhancing biodiversity and access to nature, and avoiding development which results in significant fragmentation or isolation of natural habitats;
- Identifying opportunities to expand the GI functions of greenspaces and their contribution to a positive sense of place;
- Tackling network and qualitative deficiencies.

Contribution to Cumulative Effects

The development of new housing and employment sites and enhancing the vitality of New Romney, Lydd and smaller settlements in the Romney Marsh area will provide housing, employment and services for the needs of local communities. They will also contribute to increased demand for use of the road network and contribute to increased greenhouse gas emissions. Improving access to Lydd Airport for road vehicles will also increase demand for road space, although improving rail connections may help to bring about a modal shift and reduce demand for road space. Improvements to the junction of the A259 and B2075 should assist the function of the junction, potentially assisting mineral site traffic.

Minerals development may potentially be in conflict with green infrastructure policy for Lydd.

Relevant minerals site: M2

Council Core Strategy Review, Consultation Draft Plan, Shepway District Council, March 2018

The future spatial priority for new development in the Romney Marsh Area is on accommodating development at the towns of New Romney and Lydd, and at sustainable villages; improving communications; protecting and enhancing the coast and the many special habitats and landscapes, especially at Dungeness; and avoiding further co-joining of settlements and localities at the most acute risk to life and property from tidal flooding.

In all other substantive aspects, the policies for Lydd and New Romney are unchanged.

Contribution to Cumulative Effects

As for the Core Strategy Local Plan September 2013

Maidstone Borough Local Plan, Maidstone Borough Council, October 2017

An expanded Maidstone urban area will be the principal focus for development in the borough. Approximately 1,846 new dwellings will be delivered on 23 sites, with approximately 11,400m² of retail floorspace, approximately 6,000m² of employment floorspace and a medical campus of up to 100,000m² floorspace. Key infrastructure requirements include improvements to highway and transport infrastructure, including junction improvements, capacity improvements and improved pedestrian/cycle access and bus prioritisation measures

Rural service centres including Harrietsham and Lenham will be a secondary focus for housing development with the emphasis on maintaining and enhancing their role and the provision of services to meet the needs of the local community. Suitably scaled employment opportunities will also be permitted, building on and expanding existing provision in these locations.

In Harrietsham, key services will be retained and supported. In addition to minor development and redevelopment of appropriate sites, approximately 242 new dwellings will be delivered on three allocated sites. Two existing sites are designated as Economic Development Areas in order to maintain employment opportunities in the locality. Key infrastructure requirements for Harrietsham include improvements to highway and transport infrastructure including improvements to the A20 Ashford Road, improvements to Church Road and the provision of additional pedestrian crossing points

At the rural service centre of Lenham, key services will be retained and supported. In addition to minor development and redevelopment of appropriate sites, approximately 155 new dwellings will be delivered on

two allocated sites, Tanyard Farm and Glebe Gardens, both to the east of Lenham on the Old Ashford Road. Three existing sites are designated as Economic Development Areas in order to maintain employment opportunities in the locality. Key infrastructure requirements for Lenham include improvements to highway and transport infrastructure including junction improvements, a variety of measures to improve sustainable transport infrastructure, and improvements to pedestrian access. The council will seek to maintain and enhance the existing retail function and supporting community uses in The Square.

Lenham is also identified as a broad location for growth for the delivery of approximately 1,000 dwellings post April 2021. Master planning of the area will be essential to achieve a high quality design and layout, landscape and ecological mitigation, and appropriate provision of supporting physical, social and green infrastructure. Housing site allocations and associated infrastructure requirements will be made through the Lenham Neighbourhood Plan or through the local plan review to be adopted by April 2021. The broad location for growth is on the east side of Lenham, between the current built up area and the Northdown Business park on the Ashford Road to the west of mineral site M3.

The council and its partners will:

- Ensure the transport system supports the growth projected by Maidstone's local plan and facilitates economic prosperity;
- Deliver modal shift through managing demand on the transport network through enhanced public transport and the continued Park and Ride services and walking and cycling improvements;
- Improve highway network capacity and function at key locations and junctions across the borough;
- Improve transport choice across the borough and seek to influence travel behaviour;
- Address the air quality impact of transport.

A prestigious business park at Junction 8 of the M20 that is well connected to the motorway network will provide for a range of job needs up to 2031. The site will make a substantial contribution to the need for new office space in the borough as well as meeting the 'qualitative' need for a new, well serviced and well connected mixed use employment site suitable for offices, industry and warehousing.

Contribution to Cumulative Effects

Proposed housing and economic development at Lenham and Harrietsham will provide housing, employment and services to meet the needs of communities, contributing to their wellbeing. It will increase traffic on the A20 and through junction 8 of the M20, potentially in competition with the traffic accessing the minerals site.

Policy on managing the transport impacts of development may help to avoid or reduce increased demand for road space. The development of new sites for housing and employment is likely to increase pressures on biodiversity. Greenhouse gas emissions will be increased.

Relevant mineral site: M3

Submission Local Plan 2030, Ashford Borough Council, December 2017

A total housing target of 12,950 net additional dwellings applies for the Borough between 2017 and 2030. The majority of new housing development will be at Ashford and its periphery, as the most sustainable location within the Borough based on its range of services and facilities, access to places of employment, access to public transport hubs and the variety of social and community infrastructure available. In addition to existing commitments, new land allocations to deliver 5,159 dwellings are proposed.

Job growth and economic prosperity will be supported in order to enable the achievement of a sustainable economy with the intention to deliver 66 hectares of new employment land and a total of 11,100 jobs in the Borough between 2014-30.

A regenerated Ashford Town Centre will expand significantly its leisure, cultural, educational and residential offer. A new Commercial Office Quarter next to the railway station will be a major economic impetus for the area, helping to substantially increase employment, trigger more spending in the town centre economy, and improve wage rates and skills levels.

The other rural service centres, including Charing, will remain important providers of local shops and services, whilst delivering new development of a scale appropriate to the individual characteristics of the settlement. Smaller rural settlements will also provide smaller scale new development, to help sustain local communities.

Land at Northdown Service Station in Charing is proposed for residential development for up to 20 dwellings. Development proposals for this site shall provide vehicle access onto the A20 Maidstone Road.

The land south of the Arthur Baker playing fields in Charing is proposed for residential development, up to 35 units. Development proposals for this site shall provide a vehicular, pedestrian and cycle link from the A20 through the site to the adjoining Arthur Baker playing fields and be designed to include a built-up frontage to the A20.

The site to the rear of the Holiday Inn at Hothfield is proposed for residential development with an indicative capacity of 150 dwellings. Development proposals for the site shall be designed and laid out to take account of the surrounding uses in particular the existing hotel and the M20 motorway and provide a primary vehicular access directly from the A20 Ashford Road.

The site to the rear of Westwell Lane at Tutt Hill is proposed for residential development with an indicative capacity of 75 dwellings. Development proposals for this site shall provide primary vehicular access from the A20 Ashford Road.

Provision of new employment premises, and the redevelopment, enhancement and reconfiguration of existing employment premises will be permitted within or adjoining the built-up confines of Ashford, Tenterden and the rural settlements, provided that: any impact upon the local road network can be mitigated. In the rural settlements, it must be demonstrated that the development will not generate a type or amount of traffic that would be inappropriate to the rural road network that serves it.

Contribution to Cumulative Effects

The provision of housing and employment sites in the Borough will help to meet the needs of communities leading to increased wellbeing. Development of greenfield sites is likely to lead to increased pressure on biodiversity. Proposed housing developments at Charing and to a lesser extent at Hothfield and Tutt Hill are likely to increase demand for road space on the A20, potentially in competition with mineral site traffic. The Plan requires mitigation of impacts on the road network, so effects should be minimised although this is uncertain.

Housing and economic growth in Ashford is likely to increase traffic on the M20. The scale of this will be significantly greater than the impacts from minerals site traffic, which will arise from site M3 and also M2 as Ashford is likely to be an important market for minerals from site M2.

Relevant minerals site: M3, M2

Local Plan Regulation 19 Pre-submission Publication, Tonbridge and Malling Borough Council, September 2018

The Local Plan provides for at least 6,834 dwellings to address in full the Objectively Assessed Need for housing during the plan period up to 2031. Provision is made for at least 38 ha of additional employment land to address the needs of the borough during the plan period up to 2031. Development will be concentrated within the confines of urban areas, which include Tonbridge, the Medway Gap (including

Aylesford, Ditton, Larkfield, Leybourne areas) and Snodland. Major new housing development will be delivered at the following strategic sites during the plan period up to 2031:

- Bushey Wood, Eccles – 900 dwellings;
- Broadwater Farm, north of Kings Hill – 900 dwellings;
- South-west Tonbridge – 480 dwellings.

Outside of the urban areas, the focus of development will be within the confines of the Rural Service Centres, including West Malling. Within the confines of other rural settlements, development will be restricted to development that is proportionate to the scale and appropriate to the character of the settlement. These include Ryarsh, Addington, Addington Clearway, Birling Trottiscliffe, Wrotham and Wrotham Heath.

The Council will work in partnership with Kent County Council, Highways England, transport providers and other key stakeholders to ensure that developments:

- are designed so that opportunities for sustainable transport modes are maximised; and
- make the necessary contributions to the improvement of existing, and provision of new, transport schemes that lead to improvements in accessibility and give priority to the needs of pedestrians, cyclists, users of public transport, car sharers and users of low and ultra-low emission vehicles;

The following areas are identified as areas of opportunity to help address the future longer-term development needs of the borough beyond 2031:

- Bushey Wood, Eccles
- East Malling Research Station, south Aylesford & Ditton

Land at East Malling Research Station can only be released for development in the post plan period once significant improvements to the A20/Mills Road/Hall Road junction have been implemented to the satisfaction of Kent County Council and the link between Hermitage Lane and the A20 at the 20/20 roundabout is complete and open and improvements to Junction 5 of the M20 motorway have been implemented.

The following sites, as defined on the proposals map, are allocated for employment development:

- North of RBLI Warehouse, Aylesford (1.5 ha) (B1 and B8 uses)
- East Malling Research Station (East) (5.5ha) (B1uses)
- East Malling Research Station (West) (2.3 ha) (B1 uses)
- Little Postern, Postern Lane, Tonbridge (10.8ha) (B2 and B8 uses)
- Munday Works, Tonbridge (1.7 ha) (B1 and B2 uses)

Development of the sites for employment uses will only be permitted where it is of an acceptable design to the locality and does not result in unacceptable impacts on the highway network, air quality and the amenity of the area

Contribution to Cumulative Effects

The proposed housing and employment growth will enable the needs of communities for jobs and homes to be met. However, the growth will result in increased greenhouse gas emissions. Development of new sites is likely to lead to increased pressure on biodiversity from habitat loss and disturbance. Proposed developments in the Medway Gap and at Snodland and Eccles are likely to increase demand for road space, including on the A20. This could potentially be in competition for road space with minerals site traffic, although as the proposed developments are at some distance from the minerals site cumulative effects on the road network may not be significant.

The employment site at Postern Lane Tonbridge is likely to contribute to cumulative impacts on the local road network which is constrained in that area. Housing development south west of Tonbridge is likely to increase traffic on the A21.

Impacts of development on the transport network may be offset to some degree by the requirement for measures to mitigate effects, although the overall balance of effects is not certain.

Relevant minerals sites: M8, M10, M12, M13

Site Allocations Local Plan, Tunbridge Wells Borough Council, July 2016

Land at Brook Farm, Capel (adjacent to this borough's boundary with Tonbridge & Malling Borough), as shown on the Villages & Rural Areas (Capel) Proposals Map, is designated as a Key Employment Area.

Contribution to Cumulative Effects

The designated Key Employment Area is likely to increase traffic on the A228, although the site is relatively small and the impacts are likely to be minor.

Relevant minerals site: M10, M13

Core Strategy DPD, Tunbridge Wells Borough Council, June 2010

Policy for development in Royal Tunbridge Wells provides for approximately 4,200 net additional dwellings over the period 2006 to 2026. It encourages a greater proportion of office space (B1) within the town centre, with approximately 23,500sqm (net) additional comparison retail floorspace to be provided by 2017 in the town centre. The Core Strategy emphasises the role of the town centre as a focal point for a mix of employment, retail and complementary uses.

Approximately 300 net additional dwellings will be delivered in Southborough. In the order of 500sqm (net) additional comparison floorspace will be delivered by 2017. Infrastructure improvements to encourage the uptake of sustainable transport modes, such as walking, cycling and use of public transport, will be pursued in order to reduce congestion and improve transport links to Royal Tunbridge Well. Measures to improve air quality within the Air Quality Management Area will be investigated and pursued.

Contribution to Cumulative Effects

Proposed developments in Royal Tunbridge Wells and Southborough are likely to contribute to increased wellbeing by meeting the needs of communities for homes and jobs. However, they will contribute to increased greenhouse gas emissions and increased demand for space on the road network, potentially including the A21, although this may be offset to some degree by measures to encourage sustainable transport use and air quality improvements.

Relevant minerals sites: M10, M12, M13

Dartford Core Strategy, Dartford Borough Council, September 2011

Dartford Town Centre and Northern Gateway are to provide up to 3070 homes and 1500 jobs and up to 24,000m² net shopping floorspace. Of this, Northern Gateway will provide up to 2,040 homes, 1200 jobs in B1, B2 and B8 uses and provision of a mix of uses and the creation of a new area of public realm around the Mill Pond. Uses may include local shops and leisure uses, a hotel, community facilities and cafes, pubs and restaurants fronting onto the waterside.

The Core Strategy will create multifunctional greenspace alongside the River Darent and within and across the Northern Gateway site, providing at least 30% open space across the site, with provision for biodiversity and landscape improvements as well as recreational, sporting and amenity areas. Land at Dartford Fresh Marsh, the Mill Pond and the provision of a park on the eastern side will form part of the provision.

The Core Strategy seeks to minimise the amount of traffic generated by the Northern Gateway site, with an emphasis on sustainable forms of travel, with Fastrack provision through the site, direct access to Dartford station and foot and cycle connectivity. Planning applications must be supported by a transport assessment which takes into account all planned development in the town centre as well as the Northern Gateway. In advance of a Community Infrastructure Levy (CIL), a proportionate contribution will be required towards short-term mitigation measures to address any impact of the proposal on Junction 1a of the M25 (A282). A Travel Plan will be required for each application.

New residential communities will be focused on Ebbsfleet Valley and Stone, providing up to 7,850 homes within the Plan period, with further development beyond 2026. The Plan will also provide 9,700 jobs in offices and other B1 uses within the Plan period, with a concentration of these in the Ebbsfleet Valley. A centre of excellence for sport and recreation will be provided at Stone Lodge, expanding on the existing Olympic-level provision on the site. Options for the evolution of Bluewater which provide for a wider range of uses will be explored. At Ebbsfleet Valley, a community of up to 10,000 homes, (up to 5,250 assumed to be provided in the Plan period) with a business district providing approx 16,900 jobs, (up to 9,500 assumed to be provided in the Plan period) and leisure and retail uses to support local residents, workers and visitor.

The Kent Thameside Strategy for the waterfront seeks to open up access to the river for existing and future communities and to produce a high quality riverscape. Recent piecemeal development of the Thames Waterfront has not achieved the full potential that co-ordinated development of the riverside could bring. A number of potential sites on the Thames Waterfront present a unique opportunity to create mixed use development, bringing life and activity back to the river. The Council will promote the creation of a vibrant mixed-use riverfront, incorporating sustainable communities, new employment opportunities, leisure use of

the river /riverside and use of the river for sustainable transport, by supporting residential development of up to 3,750 homes and provision of up to 456,000 sq m of employment floorspace.

The Core Strategy seeks to protect and enhance Black Duck Marsh and Dartford Marshes as areas of biodiversity value and public recreational areas for quiet enjoyment, to the extent that the ecological protection of the area permits. New development will be expected to include connecting corridors of natural habitat along the river to enhance biodiversity linkages and to protect s41 species and other species of local ecological value.

In order to reduce the need to travel, minimise car use and make the most effective use of the transport network, the Council will:

- Encourage mixed use development and close interrelationship between complementary land uses: homes, jobs, shops and leisure, recreational and community facilities;
- Require major development sites to make provision for Fastrack as part of planning proposals.

In order to enable the transport network to respond to the pressures of new development, the Council will work with its partners to deliver a Strategic Transport Infrastructure Programme to ensure that the transport network operates at acceptable levels and that the transport infrastructure is in place to support new development.

The following infrastructure improvements are identified:

- Provision of Fastrack route through the Northern Gateway site by 2021
- A206/Marsh Street - replacement of roundabout with signal controlled junction by 2021
- Junction 1A improvements by 2021

Contribution to Cumulative Effects

Planned housing and employment developments in Dartford will contribute to the wellbeing of communities by providing homes and jobs to meet identified needs. It will also contribute to increased greenhouse gas emissions. Growth in the town centre and Northern Gateway strategic site will create increased demands for space on the road network, very likely including the M25 and potentially also Bob Dunn Way although this is less likely. Growth in Stone and Ebbsfleet is also likely to increase demand for road space on the M25. This could potentially lead to cumulative impacts with minerals site traffic, although the scale of minerals traffic

impacts will be much smaller in comparison. Transport infrastructure improvements may help to reduce the level of additional demand. The Core Strategy is likely to contribute to biodiversity enhancement and public wellbeing by providing multifunctional greenspace and improved habitat connectivity.

Minerals development may potentially be in conflict with biodiversity and recreational policy in the Dartford Marshes.

Relevant minerals sites: M7, M11

Bexley Core Strategy, London Borough of Bexley, February 2012

The Core Strategy provides for 5468 new dwellings and employment growth of 12500 jobs 2011-2026. Crayford and Erith are identified growth areas with 1412 new dwellings and 2250 new jobs for the Erith and Slade Green area, and 717 new dwellings and 1750 jobs for Crayford and Old Bexley area.

The vision for the Erith geographic region will be achieved by:

- making contributions to future housing and employment growth across the area but particularly through development opportunities in and around Erith town centre, Slade Green, and designated employment sites in the region;
- supporting higher levels and more diverse employment, improved environmental quality of industrial estates, enhanced public transport links and access to skills and training for new jobs by supporting businesses in the region's town centres and employment areas;
- encouraging further retail development, leisure developments and an enhanced variety of uses.

The vision for the Crayford and Old Bexley geographic region will be achieved by:

- contributing to housing and employment growth by focusing growth in and around Crayford town centre and the nearby employment locations, and to a lesser extent, Old Bexley
- supporting Crayford's business function, as well as the managed consolidation of employment uses, within the region;
- progressing proposals that address local traffic issues, such as congestion in and around the town centres (including the Bexley by-pass scheme, and London Road, Crayford) and low public transport

accessibility levels, and schemes that would reduce reliance on car use (including walking and cycling);

The Council will assist in developing a strong and sustainable local economy, so as to contribute to London and Thames Gateway regeneration.

The Council will work to achieve a comprehensive, high quality, safe, integrated and sustainable transport system which makes the most of existing and proposed transport infrastructure within the borough and seeks to ensure a much improved and expanded role for public transport through effectively maintaining and managing the existing highway network to ensure the free flow of traffic, improve the environment, in particular air quality, and promote safety, health and wellbeing.

Contribution to Cumulative Effects

Planned housing, employment, retail and leisure development in Bexley will contribute to community wellbeing by providing jobs and homes to meet the needs of local communities. Growth will also contribute to increased greenhouse gas emissions. Growth planned for Erith, Crayford and Old Bexley will add to demand for space on the road transport network both locally and also the M25, which may have attendant impacts on the Bexley and Dartford AQMAs. Measures to promote sustainable transport choices and address traffic issues will help to offset the potential adverse impacts on the road network and air quality.

Relevant minerals sites: M7, M11

Bexley Growth Strategy, December 2017

Good growth will be secured by focusing new residential development on a series of well-connected public transport nodes, making the most of Bexley's riverside location and industrial heritage. Core industrial areas retained for employment uses will be improved and intensified.

Erith will provide the opportunity to deliver an exciting and well-connected urban riverfront destination of up to 6,000 new homes, with the area supporting up to 2,000 new jobs through a shift to new engineering and manufacturing activities.

Crayford will provide the opportunity to consolidate and redefine the town centre, opening up the north of the area to up to 1,000 new high quality homes with increased access to a more naturalised River Cray. Employment will remain important to Crayford, with uses consolidated to the east, delivering 1,000

additional jobs. Targeting key junctions for improvement will allow for the enhancement of movement in and around the town centre and will increase local connectivity.

Situated next to one of London's remaining marshlands along the River Thames, Slade Green will be transformed into a high quality neighbourhood with a new local town centre set around a potential new Crossrail station and access to outstanding recreational spaces, delivering up to 8,000 new homes and 1,000 new jobs.

In line with principles of sustainable development, the strategy seeks to provide transport-orientated development where higher density mixed-use development is concentrated around public transport nodes, thereby making the most efficient use of the best-connected land. The proposed growth figures for housing and jobs are based on significant increases in connectivity through improvements to the existing transport infrastructure in Bexley,

The main elements of strategic transport infrastructure that will trigger growth in the borough are:

- a new transit system that introduces high quality local services, which link the main areas of activity and major transport nodes, the expectation being that there will ultimately be an uninterrupted segregated public transport corridor from Slade Green through to Abbey Wood and South Thamesmead, forming the basis of a future bus rapid transit corridor and/or tram operation;
- a DLR extension from the Becton line under the River Thames to Thamesmead, which could be extended on to Belvedere;
- an extension of Crossrail from Abbey Wood to Ebbsfleet, introducing high frequency and faster journey times to key employment and leisure destinations – an extension on dedicated infrastructure that would require approximately 20km of new lines, signalling and electrification to avoid 'performance pollution' resulting from mixing with existing North Kent Line services; and,
- new river crossings to address severance across the River Thames and provide much improved access between different market areas.

The strategy also envisages investment in necessary highway capacity at locally strategic road bottlenecks.

Contribution to Cumulative Effects

Growth planned for Erith, Crayford and Slade Green will add to demand for space on the road transport network both locally and also the M25, which may have attendant impacts on the Bexley and Dartford AQMAs. It will also contribute to increased greenhouse gas emissions. Measures to promote sustainable

transport choices and address traffic issues will help to offset the potential adverse impacts on the road network and air quality.

Relevant minerals sites: M7, M11

Core Strategy and Policies for Management of Development (as amended), Thurrock Council, January 2015

The Core Strategy makes provision through allocations at broad locations for approximately 13,550 dwellings for the period 1 April 2009 to 31 March 2021. Within the overall total allocation, the Council has also made an Indicative provision for 4750 dwellings for the 5-year period 1 April 2021 to 31 March 2026. The great majority of new housing and associated development for the period 2009-2021 will be located in and around the Thurrock Urban Area Key Centre for Development and Change including:

- Purfleet: 3180 dwellings;
- West Thurrock/Lakeside Basin: 3365 dwellings;
- Grays: 2605 dwellings;
- Tilbury: 470 dwellings;
- Chadwell St Mary: 390 dwellings.

For the Period 2021-2026, indicative locations and capacity are as follows:

- Lakeside Basin: 2600 dwellings (approx.);
- Tilbury Town Centre: 546 dwellings (approx);
- Grays: 1935 dwellings (approx);
- West Thurrock: 279 dwellings (approx);
- Stanford-le-hope and Corringham: 250 dwellings (approx).

The great majority of new housing, employment and associated development in the Borough will be located in the Lakeside/West Thurrock Regeneration Area. A mix of 3,300 new dwellings will be located to the south

and east of Lakeside; new Neighbourhood Areas will be developed at West Thurrock and South Stifford including community and health facilities, primary schools and shopping facilities.

The Lakeside Basin will be transformed into a Regional Centre (town centre), and, together with the wider area, will provide between 7,000 and 9,000 jobs. Development will include a substantial expansion of retail floorspace (50,000 m² net of comparison floorspace) to serve sub-regional needs and additional convenience and service retail, office and leisure floorspace to broaden the mix of uses.

The transport network will be redesigned with improved accessibility east and west to Lakeside Shopping Centre from the A13, a relocated bus station and environmental improvements surrounding the Shopping Centre, including road and parking alterations.

The Plan proposes the provision of a new railway station at West Thurrock, introduces the South Essex Rapid Transit and will ensure pedestrian access will be improved, including north-south access from the river through Lakeside and West Thurrock to the Green Belt and beyond to South Ockendon.

Grays will be modernised and regenerated as the key Civic, Cultural and Education centre in the Borough. There will be provision of approximately 2,600 additional dwellings of different types and 1600 jobs including commercial offices in and around Grays. A new commercial and residential quarter will be developed to the south of the railway.

The Council has identified the Key Strategic Infrastructure Projects set out below as essential to the delivery of the Core Strategy, including.

- M25 widening to Dual four lanes north of Junction 30.
- M25 Junction 30/31 Improvements.

North of the Dartford crossing is identified as a key strategic employment hub and regeneration area.

The Council will work with partners to deliver at least a 10% reduction in car traffic from forecast 2026 levels. Measures include the following:

- Improve public transport infrastructure in the Thurrock Urban Area through the phased delivery of the South Essex Rapid Transit (SERT) and other inter-urban public transport and bus priority, allowing fast and reliable services to the new Community Hospital and Learning Campus at Grays, Lakeside Regional Shopping Centre, and employment opportunities.

- Ensure new development promotes high levels of accessibility by sustainable transport modes and local services are conveniently located to reduce the need to travel by car.
- Employ Smarter Choices measures to change travel behaviour to achieve a reduction in forecast traffic and help to deliver better air quality and a better environment for job creation. Priority areas for Smarter Choices programmes include Grays and Lakeside.
- Identify priority areas such as Grays town centre and Lakeside Basin, for network efficiency improvement measures to address congestion and air quality issues. Other Air Quality Management Areas as well as growth/regeneration areas will undergo transport network improvements, including where improved access is required.

Regeneration and remodelling of the wider Lakeside Basin and West Thurrock areas will be taken forward with the following guiding principles:

- Securing more sustainable movement patterns, reduced private motor vehicle dependence and complementary travel demand management measures including an area-wide travel plan.
- Improving local accessibility and connectivity by public transport and pedestrian and cyclist permeability throughout the area including consideration of ways to reconnect the north and the south of the area, a high frequency service rail station in the south, and a personal rapid transit system.
- Providing the necessary improvements to the local and strategic road network.
- Introduction of a car parking charging and management regime.
- The Council will work with partners to deliver improvements to national and regional transport networks to ensure growth does not result in routes being above capacity. Public transport improvements will be prioritised in order to achieve a modal shift. To achieve this the Council and partners will:

Contribution to Cumulative Effects

Planned housing, employment, retail and leisure development in Thurrock will contribute to community wellbeing by providing jobs and homes to meet the needs of local communities. Proposed development in Thurrock will add to pressure on the M25 which could affect congestion and air quality south of the Dartford Crossing. Infrastructure improvements and measures to promote more sustainable transport modes may go

some way to offsetting the potential adverse impacts on the road network and on air quality along the M25. Greenhouse gas emissions will increase with the planned housing and employment growth.

Relevant minerals sites: M7, M11

Local Transport Plan 4: Delivering Growth Without Gridlock 2016-2031, Kent County Council

The Council's strategic transport priorities include the following:

- Enabling Growth in the Thames Estuary with a range of measures including Crossrail extension to Dartford and Ebbsfleet and an expanded Fastrack bus network.
- Bifurcation of Port Traffic: traffic for the Eastern Docks would be encouraged to use the M2/A2. Bifurcation will also facilitate growth of Whitfield, Folkestone, Ashford and Maidstone by releasing capacity on the M20.
- Port Expansion: The Western Docks will provide a cargo terminal with a port-centric distribution centre, allowing the existing cargo operations to move out of the Eastern Docks so a dedicated ferry terminal and an increase in freight vehicle space can be delivered. The Port of London has set its goal to become the busiest it has ever been by 2035, including greater use of the Thames wharves for river transport of freight that will take up to 400,000 lorries of the region's roads. The Port of Sheerness largely handles bulk goods and also has significant expansion plans. The Port of Ramsgate has potential for growth and could also contribute to the strategic priority of bifurcation.
- A Solution to Operation Stack: delivery of a Lorry Area that will reduce the need to use the M20 to queue freight vehicles during times of disruption to cross-Channel services

Transport schemes that have a countywide impact (particularly in terms of supporting sustainable travel) are:

- Kent Thameside Local Sustainable Transport Fund (£4.5m LGF funding), a capital programme of works for Dartford and Gravesham delivering schemes to promote the use of alternative modes of transport to the private car, e.g. cycle parking, cycle and walking routes and bus infrastructure.
- West Kent Local Sustainable Transport Fund (£4.9m LGF funding), a capital programme of works delivering schemes to promote the use of alternative modes of transport to the private car, including Snodland Station forecourt, Tonbridge Station access improvements, Maidstone East Station improvements and Swanley Station improvements.

- 'Smart' (managed) motorway to increase capacity on the M20 and M26.

Transport priorities for Dartford include:

- Improvements or new bridge at A282 Junction 1a
- Pedestrian/cycle bridge over River Darent at Northern Gateway strategic site
- Measures to address the impacts of Dartford Crossing traffic on the local road network
- Dartford town centre improvements

Priorities for Maidstone include M20 junctions 3 to 5 'smart' (managed) motorway system.

Transport priorities for Shepway include:

- Highway improvements and sustainable access to support Lydd Airport
- New Romney South Spine Road, A259 west of New Romney to Mountfield Road

Contribution to Cumulative Effects

Proposed measures are likely to relieve pressure on the road network in Dartford, increase capacity on the M20 and M26, improve traffic flow in the Romney Marsh area and promote greater use of the rail network. Impacts on greenhouse gas emissions are uncertain.

Relevant minerals sites: M2, M3, M7, M8, M11

Waste and Minerals Plan for East Sussex, South Downs and Brighton & Hove, February 2013

The Authorities will maintain provision for the production of land won aggregates at a rate of 0.10mtpa throughout the Plan period. The Mineral Planning Authorities will maintain a landbank of at least 7 years of planning permission for the extraction of sand and gravel.

Contribution to Cumulative Impacts

The Plan will support continued extraction of sand and gravel at sites in East Sussex.

Relevant minerals site: M2

Waste and Minerals Sites Plan, East Sussex County Council, February 2017

The following land-won minerals resources are identified as Mineral Safeguarding Areas:

- Scotney Court Farm, Jury's Gap Road, Camber, near Lydd
- Scotney Court Extension and Wall Farm, Jury's Gap Road, Camber, near Lydd
- Broomhill, near Lydd

Contribution to Cumulative Effects

The Plan will support continued extraction of sand and gravel at sites on the Dungeness peninsula.

Relevant minerals site: M2

Core Strategy, Rother District Council, September 2014

The Strategy for the Overall Spatial Development is to:

- plan for at least 5,700 dwellings (net) in the district over the period 2011-2028;
- plan for at least 100,000 square metres of gross additional business floorspace.

New development will be focused at Bexhill, giving particular attention to promoting economic regeneration and growth of the Hastings and Bexhill area. Some development will be provided for in Battle and Rye that helps maintain their small market town roles and is consistent with their respective environmental constraints and settings.

Proposals for development and change in Rye and Rye Harbour Village will:

- Promote efficiencies and improvements to the strategic transport network to improve connectivity between Rye and other major urban centres;
- Support traffic management on the local road network, promote sustainable alternatives to the car and implement the objectives stated in Local Transport Plan 3 and the Rye Local Area Transport Strategy;
- Provide between 355-400 dwellings net additional dwellings between 2011 and 2028. Opportunities for growth will primarily be sought within the built up area of Rye;
- Seek to secure and maintain effective flood defences for Rye and Rye Harbour, whilst also minimising and managing flood risk, including in relation to the location of new development in accordance with other criteria;
- Promote at least 10,000 sq m of employment floorspace at Rye Harbour Road industrial estate to promote economic regeneration and job creation.

Contribution to Cumulative Effects

Planned housing and employment development in Rother will contribute to community wellbeing by providing jobs and homes to meet the needs of local communities. It will also contribute to increased greenhouse gas emissions. Planned housing and economic growth at Rye and Rye Harbour will add to demand for space on the local road network. This will be offset to some degree by planned improvements to the transport network and promotion of more sustainable modes of transport.

Relevant minerals site: M2

Local Transport Plan 3 2011-2026, East Sussex County Council, June 2011

The key priorities in Rye are to:

- work with Rother District Council to identify improvements to transport infrastructure to support sustainable development in Rye which emerges through the LDF,
- focus on improvements on safe, coherent walking and cycling routes on key routes/corridors in Rye,
- focus on improvements to public transport on key routes and corridors in Rye.

Contribution to Cumulative Effects

The Plan will help to mitigate the demand for road space associated with the planned housing and economic growth in Rye, easing pressure on the network. In Rye, measures will help to reduce greenhouse gas emissions.

Relevant minerals site: M2

New London Plan – Consultation Draft, London Assembly, December 2017

The draft Plan identifies the following Opportunity Areas:

- Thamesmead and Abbey Wood: 8000 new homes and 4000 new jobs. Alongside the opening of the Elizabeth Line in December 2018, major investments in transport infrastructure such as the proposed DLR extension from Gallions Reach are also needed to support high density development and provide access to areas of significant employment growth.
- Bexley Riverside: 6000 new homes and 19,000 new jobs. The Bexley Riverside Opportunity Area stretches along the south side of the Thames and includes the areas of Belvedere, Erith, Slade Green and Crayford. Future improvements to accessibility through better services on the existing transport network, and the extension of the Elizabeth Line to Slade Green and beyond, offer the opportunity for significant redevelopment around the stations. The Mayor will support the borough and the adjoining Kent authorities in seeking a Government-led extension of the Elizabeth Line. In the interim, within London, the Planning Framework should explore the level of growth that could be supported through significantly enhanced bus services and priority measures.

The Mayor will work with WSE partners to find solutions to shared strategic concerns such as: barriers to housing and infrastructure delivery; factors that influence economic prosperity; the need to tackle climate change (including water management and flood risk); improvements to the environment (including air quality) and waste management (including the promotion of Circular Economies); wider needs for freight, logistics and port facilities; and scope for the substitution of business and industrial capacity where mutual benefits can be achieved.

Contribution to Cumulative Effects

Planned housing and employment growth will contribute to community wellbeing by providing jobs and homes to meet the needs of local communities. It will also contribute to increased greenhouse gas emissions. Planned housing and economic growth at Bexley Riverside, and to a lesser extent, at Thamesmead and Abbey Wood, may create additional pressures on the road network in Dartford, although measures are planned to make improvements to infrastructure and promote more sustainable modes of traffic which will help to reduce the additional pressure that planned levels of development will bring on the road network.

Relevant minerals sites: M7, M11

Minerals and Waste Local Plan 2013-30, Kent County Council, July 2016

The proposed extension areas for Norwood Quarry and Landfill Site, Isle of Sheppey are together identified as the Strategic Site for Waste in Kent. The site of the proposed Medway Cement Works, Holborough and its permitted mineral reserves are together identified as the Strategic Site for Minerals in Kent.

Sites that have permanent planning permission for waste management, or are allocated in the Waste Sites Plan are safeguarded from being developed for non waste management uses. A non-hazardous treatment site is located in Dartford, as well as at other locations around the county.

Facilities for the storage and/or management of radioactive waste will be acceptable within the Nuclear Licensed area at Dungeness where this is consistent with the national strategy for managing radioactive waste and discharges and the outcome of environmental assessments justify it being managed on site.

The Plan lists a large number of existing operational and inactive waste and minerals sites. Some of these could contribute to cumulative effects in combination with sites in the MSP.

Contribution to Cumulative Effects

The following sites have the potential to contribute to cumulative effects in combination with mineral sites in the MSP. In most cases the impacts are most likely to be on the road network, with the potential for adverse effects on air quality, congestion and amenity for communities in the vicinity of the roads. However, it is also possible that where existing sites are very close to sites in the MSP, the cumulative effects could arise from the combined impacts from operations on the site. This could affect the amenity of

people living in or visiting the local communities through noise, dust, visual impacts and light. There could be similar cumulative impacts on biodiversity in the locality.

Site ref	Name	Type	Relevant minerals site
	Medway Works, Holborough	Strategic minerals site, chalk/cement	M8
50	Joyce Green Quarry	Sand and gravel	M7, M11
81	East Peckham Quarry	Sand and gravel, inert landfill	M10, M13
94	Addington Sand Pit	Industrial sand	M8
15	Lenham Quarry	Building sand, <i>inert landfill</i>	M3
133	Scotney Court Quarry	Sand and gravel	M2
143	Denge Quarry	Sand and gravel	M2
155	Aylesford Quarry	Sand and gravel	M8
	Burleign Farm, Charing Quarry		
870	Ham Hill Quarry	Secondary and recycled aggregates	M8
865	Land at Sanderson Way	Secondary and recycled aggregates	M12
478	Littlebrook Oil Management Unit	Transfer station	M7, M11
449	Fre-mell Farm, Comp Lane, Offham	Metal/end-of-life vehicle facility	M8
482	Dengemarsh Road, Lydd	Metal/end-of-life vehicle facility	M2
647	Countrystyle Depot, Lenham	CD&E recycling	M3

Management of waste at Dungeness is for waste generated on site and therefore is unlikely to give rise to cumulative effects.

Partial Review of the Kent Minerals and Waste Local Plan 2013-30, Kent County Council, December 2018

The adopted Plan identifies a shortfall in capacity of the following types over the Plan period (to 2030):

- Waste recovery capacity - energy from waste and organic waste treatment;
- Hazardous waste (due to the identified need for additional capacity to allow for the continued landfilling of asbestos);
- Disposal of Dredgings.

As a consequence, policies CSW7, CSW8, CSW 12 and CSW 14 state that a Waste Sites Plan will be prepared that will identify sites suitable for accommodating facilities needed to address the identified capacity shortfalls. A review of the future needs for waste management facilities in Kent has recently

been undertaken and this has concluded that there is now no need for the development of this additional capacity.

Encouraging more waste to be managed via re-use or recycling will be achieved by enabling policies for the development of waste management facilities for recycling and processing including a policy to grant planning permission for redevelopment or extensions to existing waste management facilities to enable more waste to be recycled or processed for re-use providing the facility's overall throughput is not increased.

Sections 5.5, 5.6, and 5.7 of the adopted Kent Minerals and Waste Local Plan (KMWLP) set out policies (CSM5, CSM6 and CSM7), with reasoned justification, for the safeguarding of:

- Land-won minerals (as defined in the Minerals Safeguarding Areas (MSAs)) from needless sterilisation from other development; and,
- Minerals supply and waste management and transport infrastructure from direct, and potential, loss due to incompatible development being sited nearby such that it has the potential to prejudice their future lawful operation.

Further policies, DM 7 and DM 8, are included to ensure that the safeguarding is not unduly rigid in its application. Policies DM7 and DM8 set out criteria to allow development that may affect safeguarded sites to proceed in certain prescribed circumstances.

Contribution to Cumulative Effects

None.

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**Kent County Council
Equality Analysis/ Impact Assessment (EqIA)
Kent Minerals and Waste Local Plan (KMWLP) 2013-30
Early Partial Review of the KMWLP 2018**

Directorate/ Service: Growth, Environment and Transport Directorate;
Environment, Planning & Enforcement

Name of decision, policy, procedure, project or service: Kent Minerals
and Waste Local Plan (KMWLP) 2013-30, Early Partial Review of the KMWLP
2018

Responsible Owner/ Senior Officer: Katie Stewart, Director of Environment,
Planning & Enforcement

Version: Version 1

Author: Sharon Thompson, Head of Planning Applications

Pathway of Equality Analysis: Environment and Transport Cabinet
Committee, Cabinet Committee, County Council

**Summary and recommendations of equality analysis/impact
assessment.**

Context

The production of a Minerals and Waste Local Plan is a statutory requirement for the County Council as a Local Planning Authority. It forms the policy basis for decision making by the County Council in determining planning applications for proposed minerals and waste management development and mineral and waste safeguarding considerations for the District/Borough Councils in determining non-mineral development.

The KMWLP was adopted by the County Council in July 2016 following external examination by a Government appointed Planning Inspector. The Plan sets out the strategy for sustainable mineral supply and waste management in the County of Kent in accordance with Government advice and planning law and guidance and requires monitoring of the effectiveness of its policies. The KMWLP committed the County Council to prepare a Waste Sites Plan to meet the needs identified in the adopted Plan. Monitoring of the effectiveness of the KMWLP and significant additional waste capacity being developed within the County since the adoption of the KMWLP has led to the need for an early partial review of the KMWLP. This review work has concluded that a Waste Sites Plan is no longer required and that changes are required to the safeguarding policies to improve their effectiveness and that revisions are required to the Plan to bring effect to the changes. .

Aims and Objectives

The Plan making process has identified the need for an early partial policy review of waste needs and safeguarding matters. This will ensure that mineral and waste management development within the County is sustainable and meets legislative requirements. It will also ensure that planning decisions have a robust policy base and that they are taken in the wider public interest.

Monitoring of the KMWLP has identified significant changes in circumstances post adoption in respect of waste supply and mineral and waste safeguarding that indicate various policies are no longer robust for planning decisions. As a result, these policies and explanatory text are to be revised in the Early Partial Review of the KMWLP. Details are set out in the Pre-Submission Draft of the KMWLP - Early Partial; Review 2018 and the supporting evidence base.

In summary, the Early partial Review proposes: modifications in the following areas:

A. Waste management:

- The strategy for provision of future waste management capacity
- The identification of site allocations for waste management facilities – there is no longer a need for a sites plan.

B. Safeguarding - The approach to safeguarding mineral resources and waste management and minerals supply infrastructure.

The detail of the proposed changes is set out in the Pre-Submission Draft - Early Partial Review of the Kent Minerals and Waste Local Plan 2018.

A key driver for the review of waste requirements was the implementation of a planning permission for a significant new waste recovery facility at Kemsley which meant that the amount of existing waste management capacity used to inform the approach in the KMWLP was no longer robust.

Overall, the review of waste requirements indicated that there was no need for additional waste recovery capacity and that there was insufficient justification for a Waste Sites Plan. As a result, changes to a number of the adopted KMWLP waste policies and explanatory text are required to remove the commitment to identify sites within a separate Waste Sites Plan. This will help ensure that there is no over-supply of recovery capacity within Kent. A change to adopted policies can only be realised via modifications which the County Council is statutorily obliged to publish for representations and then submit to the Secretary of State for independent examination.

Minerals and Waste Safeguarding

Generally, it is considered that the KMWLP is performing as intended; however, in relation to the safeguarding of mineral resources and minerals

and waste management infrastructure. Implementation of the safeguarding policies DM 7 and DM 8 has revealed an ambiguity that means the policies are not being implemented wholly as intended in respect of allocated sites in Districts' Local Plans.

The intention of these safeguarding policies is to ensure that development on sites for non-mineral development (i.e. housing and commercial) allocated in a Borough or District Local Plan would be exempt from the KMWLP's safeguarding provisions if the need to safeguard any mineral resource underlying the site, and/or proximate minerals and waste infrastructure, had been assessed and factored into the decision to allocate the sites. In practice, however, there have been occasions where the policies are being interpreted to exclude any site allocations in adopted development plans from the safeguarding process, regardless of whether minerals and waste safeguarding matters were considered during the site allocation process. This is not the intention of the policies, nor national policy guidance, and it has the potential to undermine the effectiveness of these policies. The Early Partial Review provides the opportunity to address this matter.

Proposed minor changes to policies DM7 and DM8, as well as supporting text to ensure that the safeguarding intention of the KMWLP is effective was the subject of public consultation between December 2017 and March 2018

Summary of Impact Assessment

The policy review work and the proposed changes to the MWLP are neutral in the equality impact assessment on any one protected group. The purpose of the Plan is to provide a framework for determining planning applications, which are required to be determined in the public interest. The policy review work is unlikely to have a specific impact, either positive or negative, on any of the protected groups identified below to any lesser or greater extent than the general population. In determining planning applications and interpreting the proposed changes to policy, these are determined in the context of the development plan, planning policy and guidance and material planning considerations relevant to applications on a case by case basis. The impacts in respect of protected groups will be considered again in the context of individual sites. Monitoring of the KMWLP is undertaken annually and provides contextual data on Kent's population. This work is used to monitor the effectiveness of the Plan's policy, including its impact upon the equality protected characteristics.

Summary of Equality Impact

It is reasonable to conclude that as any exercise in Plan making and Plan review leads ultimately to a certain amount of new or safeguarded development. Therefore, there is arguably a degree of low overall negative impact in the outcome of this assessment, as all development can have some negative impact on the wider environment and communities within it. There will also be balancing competing planning interests such as increased

sustainability in waste management and mineral supply. Overall, the partial review of the Plan's safeguarding and waste policies is unlikely to have a specific impact, either positive or negative on any of the protected groups identified below to any lesser or greater extent than the general population. On this basis a Part 2 full equality impact assessment is not required.

Adverse Equality Impact Rating **Low** - See table below

Attestation

I have read and paid due regard to the Equality Analysis/Impact Assessment for the Minerals Sites Plan Options Consultation. I agree with risk rating and the actions to mitigate any adverse impact(s) that has /have been identified.

Head of Service

Signed: Sharon Thompson

Job Title: Head of Planning applications

Date: 20th November 2018

DMT Member

Signed: Katie Stewart

Job Title: Director of Growth, Environment and Transport

Part 1 Screening

Could this policy, procedure, project or service, or any proposed changes to it, affect any Protected Group (listed below) less favourably (negatively) than others in Kent?

Could this policy, procedure, project or service promote equal opportunities for this group?

Page 573

Protected Group	Please provide a <u>brief</u> commentary on your findings. Fuller analysis should be undertaken in Part 2.			
	High negative impact EqlA	Medium negative impact Screen	Low negative impact Evidence	High/Medium/Low Positive Impact Evidence
Age			.	<p>Removing the need for a waste sites plan will result in potential sites not being allocated and a potential reduction of negative impacts on this protected characteristic, in the event that sites had come forward.</p> <p>A more robust safeguarding of aggregate supply will allow for the materials to be available for new and maintained highway infrastructure for access, homes, retirement homes, schools, health infrastructure and children’s centres, resulting in a potentially positive impact for this protected characteristic.</p>

<p>Disability</p>				<p>Removing the need for a waste sites plan will result in potential sites not being allocated and a potential reduction of negative impacts on this protected characteristic, in the event that sites had come forward.</p> <p>A more robust safeguarding of aggregate supply will allow for the materials to be available for new and maintained roads and pavements for access, wheelchair adaptable homes, care homes, schools, community centres and health infrastructure, resulting in a potentially positive impact for this protected characteristic.</p> <p>Policy DM 11 Health and Amenity of the Kent Minerals and Waste Local Plan 2013-30 requires all mineral development planning applications to address any impacts on matters that would affect the interests of this identified group.</p>
<p>Gender</p>				<p>Removing the need for a waste sites plan will result in potential sites not being allocated and a potential reduction of negative impacts on this protected characteristic, in the event that sites had come forward.</p>
<p>Gender identity/ Transgender</p>				<p>Removing the need for a waste sites plan will result in potential sites not being allocated and a potential reduction of negative impacts on this protected characteristic, in the event that</p>

				<p>sites had come forward.</p> <p>A more robust safeguarding of aggregate supply will allow for the materials to be available for new hospitals, roads for access and community centres, resulting in a potentially positive impact for this protected characteristic.</p> <p>Policy DM 11 Health and Amenity of the Kent Minerals and Waste Local Plan 2013-30 requires all mineral development planning applications to address any impacts on matters that would affect the interests of this identified group.</p>
Race				<p>Removing the need for a waste sites plan will result in potential sites not being allocated and a potential reduction of negative impacts on this protected characteristic, in the event that sites had come forward.</p>
Religion and Belief				<p>Removing the need for a waste sites plan will result in potential sites not being allocated and a potential reduction of negative impacts on this protected characteristic, in the event that sites had come forward.</p> <p>A more robust safeguarding of aggregate supply will allow for the materials to be available for new and maintained roads for access, places of worship and community</p>

				centres, resulting in a potentially positive impact for this protected characteristic.
Sexual Orientation				Removing the need for a waste sites plan will result in potential sites not being allocated and a potential reduction of negative impacts on this protected characteristic, in the event that sites had come forward.
Pregnancy and Maternity				<p>Removing the need for a waste sites plan will result in potential sites not being allocated and a potential reduction of negative impacts on this protected characteristic, in the event that sites had come forward.</p> <p>A more robust safeguarding of aggregate supply will allow for the materials to be available for new and maintained roads for access, health infrastructure and community centres, resulting in a potentially positive impact for this protected characteristic.</p> <p>Policy DM 11 Health and Amenity of the Kent Minerals and Waste Local Plan 2013-30 requires all mineral development planning applications to address any impacts on matters that would affect pregnancy and maternity interests of any identified groups.</p>
Marriage and Civil Partnerships				Removing the need for a waste sites plan will result in potential sites not being allocated and a potential reduction of negative impacts on this protected characteristic, in the event that sites had come forward.

<p>Carer's Responsibilities</p>				<p>Removing the need for a waste sites plan will result in potential sites not being allocated and a potential reduction of negative impacts on this protected characteristic, in the event that sites had come forward.</p> <p>A more robust safeguarding of aggregate supply will allow for the materials to be available for new and maintained roads for access, hospitals and community centres, resulting in a potentially positive impact for this protected characteristic.</p> <p>Policy DM 11 Health and Amenity of the Kent Minerals and Waste Local Plan 2013-30 requires all mineral development planning applications to address any impacts on matters that would affect Carer's Responsibilities of any identified groups.</p>
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**Kent County Council
Equality Analysis/ Impact Assessment (EqIA)
Kent Minerals and Waste Local Plan (KMWLP) 2013-30
Kent Minerals Sites Plan 2018**

Directorate/ Service: Growth, Environment and Transport Directorate; Environment, Planning & Enforcement

Name of decision, policy, procedure, project or service: Kent Mineral Sites Plan 2019-30 (the Plan)

Responsible Owner/ Senior Officer: Katie Stewart, Director of Environment, Planning & Enforcement

Version: Version 1

Author: Sharon Thompson, Head of Planning Applications

Pathway of Equality Analysis: E&T Cabinet Committee, Cabinet Committee, County Council

Summary and recommendations of equality analysis/impact assessment.

Context

The production of a Minerals and Waste Local Plan is a statutory requirement for the County Council as a Local Planning Authority. It forms the policy basis for decision making by the County Council in determining planning applications for proposed minerals and waste management development and mineral safeguarding for the District/Borough Councils.

The KMWLP was adopted by the County Council in July 2016 following external examination by a Government appointed Planning Inspector. The Plan sets out the strategy for sustainable mineral supply and waste management in the County of Kent in accordance with Government advice and planning law and guidance. It requires sites to be identified and brought forward in a Sites Plan to realise the adopted KMWLP's Objectives. The KMWLP was accompanied by an agreed EQUIA. In adopting the assessment, it was recognised that further assessment would be required for the Sites Plans and that this work would be subject to wider consultation and independent examination appointment by the Secretary of State.

Aims and Objectives

This next stage of the Plan Making process includes the preparation of a Mineral Sites Plan. This will ensure that mineral and waste management development within the County is sustainable and meets legislative requirements. The Mineral Sites Plan will form part of the adopted Kent Minerals and Waste Local Plan 2013-30 (KMWLP) that identifies the sites required to deliver the objectives of the adopted KMWLP strategy for a steady and

adequate supply of aggregates to meet the objectively identified needs for Kent over the adopted Plan period. This EqIA has been conducted to comply with the County Council's statutory obligations to ensure equality impact issues have been properly assessed

Minerals Sites Plan Options Consultation

The identification of potentially economically important mineral sites to meet the requirements of the KMWLP is highly dependent on the geographical distribution of the economic geology of Kent; along with the promotion and deliverability of potential mineral sites by landowners and operators to meet the requirements. Site allocation is undertaken in accordance with an agreed site methodology and recognised best practice.

Public Consultation

The options document identifying potential sites for future development and the partial review of the KMWLP was subject to public consultation in accordance with the Council's Statement of Community Involvement (SCI) and statutory planning requirements (Regulation 18). Community engagement is an important part of the plan making and planning application process, with opportunities for engagement and consideration against the protected characteristics, amongst other planning matters. A variety of different methods has and been used to disseminate information and to encourage participation.

Summary of Impact Assessment

The emerging Mineral Sites Plan are neutral in the equality impact assessment on any one protected group. The purpose of the Plan is to provide a framework for determining planning applications, which are required to be determined in the public interest. The emerging Mineral Sites Plan are unlikely to have a specific impact, either positive or negative, on any of the protected groups identified below to any lesser or greater extent than the general population. The Sites Plan will have no direct physical effect until such time as proposed development is granted permission and development commences. As part of the planning application process, there is a further requirement to conduct public consultation and have regard to responses made. Monitoring of the KMWLP is undertaken annually and provides contextual data on Kent's population. This work is used to monitor the effectiveness of the Plan's policy, including its impact upon the equality protected characteristics.

Summary of equality impact

It is reasonable to conclude that as any exercise in Plan making leads ultimately to a certain amount of new development. Therefore, there is arguably a degree of low overall negative or positive impact in the outcome of this assessment, as all development has some negative or positive impact on the wider environment and communities within it. There will also be balancing competing planning interests such as increased sustainability in waste management and mineral supply.

Overall, the preparation of the Mineral Sites Plan Options document is unlikely to have a significant impact, either positive or negative on any of the protected groups identified below to any lesser or greater extent than the general population. On this basis a Part 2 full equality impact assessment is not required.

Adverse Equality Impact Rating **Low**

Attestation

I have read and paid due regard to the Equality Analysis/Impact Assessment concerning **the Early Partial Review of the Kent Minerals and Waste Local Plan 2018 and the Kent Minerals Sites Plan 2108**. I agree with risk rating and the actions to mitigate any adverse impact(s) that has /have been identified.

Head of Service

Signed: **Katie Stewart**

Job Title: **Director**

Date: 20/11/2018

DMT Member

Signed: **Sharon Thompson**

Job Title: **Head of Planning Applications**

Date: 20/11/2018

Part 1 Screening

Could this policy, procedure, project or service, or any proposed changes to it, affect any Protected Group (listed below) less favourably (negatively) than others in Kent?

Could this policy, procedure, project or service promote equal opportunities for this group?

Protected Group	Please provide a brief commentary on your findings. Fuller analysis should be undertaken in Part 2.			
	High negative impact EqIA	Medium negative impact Screen	Low negative impact Evidence	High/Medium/Low Positive Impact Evidence
Age			Vulnerable adults, elderly or children, as part of this protected characteristic, could be negatively affected by the increase in pollution in the local area to the allocated sites. At the planning application stage, mitigations will be put in place to reduce the risk of this, resulting in a low overall latent risk.	The supply of the appropriate type and amount of aggregate minerals will enable more efficient maintenance of the infrastructure and provide the right amount of materials to enable new and maintained highways infrastructure for access, homes, retirement homes, schools and children’s centres, resulting in a potentially positive impact for this protected characteristic.
Disability			This may result in a low negative impact as those with this protected characteristic may be more vulnerable to the latent risk of pollution etc, however mitigations will be used at the planning application stage to minimise this, in line with Policy DM 11 Health and Amenity of	The supply of the appropriate type and amount of aggregate minerals will enable more efficient maintenance of the infrastructure and provide the right amount of materials to enable new and maintained highways infrastructure and pavements for access, wheelchair adaptable homes, care homes, schools and community centres, resulting in a potentially positive impact for this protected characteristic.

			the Kent Minerals and Waste Local Plan 2013-30 which requires all mineral development planning applications to address any impacts on matters that would affect disability of any identified groups.	
Gender				N/A
Gender identity/ Transgender				The supply of the appropriate type and amount of aggregate minerals will enable more efficient maintenance of the infrastructure and provide the right amount of materials to enable needed development to come forward which would help this protected characteristic enabling continued and increasing the facilitation of access to community and health services, employment opportunities and accommodation needs.
Race				N/A
Religion and Belief			This may result in a low negative impact on worshipers local to sites identified in the Sites Plan. Those with this protected characteristic could be negatively affected by the increase in pollution in the local area of places of worship close to the allocated sites. At the planning	The supply of the appropriate type and amount of aggregate minerals will enable more efficient maintenance of the infrastructure and provide the right amount of materials to enable new and maintained roads for access, places of worship and community centres, resulting in a potentially positive impact for this protected characteristic.

			application stage, mitigations will be put in place to reduce the risk of this, resulting in a low overall latent risk.	
Sexual Orientation				N/A
Pregnancy and Maternity				The supply of the appropriate type and amount of aggregate minerals will enable more efficient maintenance of the infrastructure and provide the right amount of materials to enable new and maintained highways infrastructure for access, hospitals and community centres, resulting in a potentially positive impact for this protected characteristic.
Marriage and Civil Partnerships				N/A
Carer's Responsibilities			This may result in a low negative impact on Carers local to sites identified in the Sites Plan. Those with this protected characteristic could be negatively affected by the increase in pollution in the local area close to the allocated sites. At the planning application stage, mitigations will be put in place to reduce the risk of this, resulting in a low	The supply of the appropriate type and amount of aggregate minerals will enable more efficient maintenance of the infrastructure and provide the right amount of materials to enable new and maintained hospitals, roads for access, and community centres, resulting in a potentially positive impact for this protected characteristic. to come forward.

			<p>overall latent risk.</p> <p>Policy DM 11 Health and Amenity of the Kent Minerals and Waste Local Plan 2013-30 requires all mineral development planning applications to address any impacts on matters that would affect identified groups dependant on care provision.</p>	
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Representations received by Environment and Transport Cabinet (ETCC) Committee post publication of papers for the meeting of 28th November 2018

1. Brett Group, the promoter of the M2 Lydd Quarry Site
2. Local resident on behalf of Whetsted Residents in respect of the M10 and M13 sites at Stonecastle Farm
3. Ryarsh Protection Group in respect of M8 West Malling Site
4. Borough Green Sandpits, the promoter of the M8 West Malling Site in the form of a legal opinion dated 27th November 2018 from Landmark Chambers

From Brett Group, the promoter of the M2 Lydd Quarry Site

Email to Members of ETCC dated 27th November 2018

To All Concerned,

Lydd Quarry has less than 2 years remaining reserves.

Brett has identified further mineral resources to keep the quarry alive.

KCC is not proposing to allocate these new resources in its new Minerals Plan.

This is now a serious concern, not only for our business, but for the community of Lydd as a whole.

There are now **very serious** consequences that I would ask you all to consider ahead of your meeting tomorrow:

Without Lydd Quarry:

50 plus jobs associated with the quarry will come to an end;

- . The only alternative for supplying construction aggregates to the Lydd Quarry market area is via imports from wharves located on the River Thames.
- . Deliveries from this alternative source instead of Lydd Quarry would raise carbon dioxide emissions by up to 17,000 tonnes.

Whilst resources are available, they should be made available.

Our products are required every day, **by you, me, and everyone.**

Lydd Quarry has a SPA designation, which coincidentally covers our restored areas. Our excellent track record of restoration can only enhance this designation.

Without Lydd Quarry, the economy of Lydd is in jeopardy.

Jobs will ultimately be at risk which I don't want to tell my 50 plus employees.

We gave every one of the 10 year Pupils at Lydd Primary School a brand new bicycle this year and paid for their cycling proficiency test; we sponsor every Lydd Club Day...all giving back to the community ...a community spirit that we respect and that we want to continue to support.

May I make a plea to come and talk to you about this individually or as a group ?

Apologies for the desperate nature of this email...but this is now serious.

Kind regards,

Senior Planning Manager

Brett Group, Robert Brett House, Ashford Road, Canterbury, Kent. CT4 7PP



LYDD QUARRY

OUR PLANS FOR THE FUTURE OF LYDD QUARRY

Lydd Quarry on the border of East Sussex and Kent has been part of the local landscape for over 50 years. Extraction of high quality and high strength sand and gravel from the Quarry, commenced in 1967 and is a key ingredient in the construction of houses and highways projects in the area.

Other local projects recently supplied include the building of sea wall defences at Camber Sands, the development of a helicopter Search and Rescue hangar at Lydd airport and the construction of a Nitrogen plant at Dungeness power station. Our products can be found in local DIY stores such as Travis Perkins and Jewson, caravan bases at local holiday parks and can even be found on the beach at Lydd.

Extending the life of the quarry

In meeting the annual demand for its products, the permitted reserves at the quarry will be exhausted within the next two years.

We have identified similar high quality deposits on land adjoining the quarry which will mean that the life of the quarry can be extended and we can continue to meet local demand for building materials for a further 15-20 years. Brett has evaluated alternative means of meeting the demand and presented its findings to the planning authorities in East Sussex and Kent, and to Natural England.

We have also assessed the environmental, ecological and socio-economic benefits of continued working. We are preparing draft designs to work the adjoining land at the quarry and over the coming months we will consult with local residents, the wider Lydd community and other stakeholders on how best to secure the long term future of the site.

Some facts about the quarry

We employ people from the local area and there are currently over 50 jobs associated with the current operations.

The quarry contributes £1.8M each year into the economy through taxes and business rates.

In 2006 the whole quarry area was designated part of a Site of Special Scientific Interest (SSSI) for its geomorphological and ecological interest by Natural England.

Ecology

In 2014, Brett restored areas were designated as a Ramsar site and, in 2016, a Special Protection Area (SPA) designation was added under European legislation. These designations recognise the international importance the restored areas at Lydd Quarry have for breeding and wintering water birds, birds of prey, passage warblers and breeding seabirds.

The extension proposals will include restoration plans which will further enhance these restored areas for wildlife, in particular creating habitat for species of birds that are considered as endangered such as the Hen Harrier.

THE CONTINUED BENEFITS OF USING LYDD QUARRY

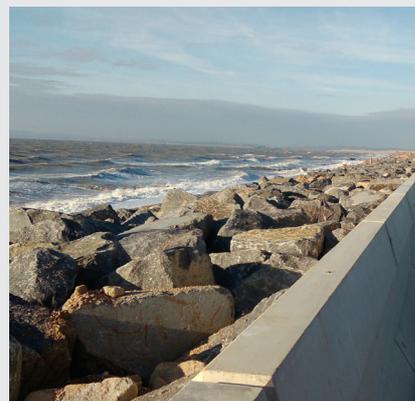
- **Job opportunities retained** – local jobs associated with the quarry will be protected for up to 20 years.
- **£1.8m economic contribution** – the site will continue to make a contribution of £1.8M in business rates and taxes to the economy.
- **Less Co2 emissions than alternative options** – the only alternative for supplying construction aggregates to the Lydd Quarry market area is via imports from wharves located on the River Thames. Deliveries from this alternative source instead of Lydd Quarry would raise carbon dioxide emissions by up to 17,000 tonnes.
- **Fewer lorry miles, and less impact on the roads than other options** – Lydd Quarry is 30 miles closer to its market area than the Thames wharves. Working the proven deposits at Lydd would save up to 11 million lorry miles of traffic on the East Sussex and Kent roads.
- **There will be no planned increases to lorry movements or operating conditions** – in the proposals for the new operating area there are no plans to increase lorry movements or operating conditions beyond current agreements.
- **The infrastructure already exists** – Lydd Quarry currently benefits from investment in mineral processing facilities, services, access and other infrastructure which will be used when working the new area. The identified reserves of sand and gravel would be sterilised if not worked while this infrastructure exists.
- **Lydd Quarry supplies specialist sand to brick making plants** in the South East of England and rounded cobbles for use in the milling industry beyond the South East. An alternative for these regionally unique products has yet to be identified.
- **Nature conservation areas would increase by 200 hectares** – Restoration of the proposed extensions and the current workings in a manner similar to the completed biodiversity targeted restoration would occur. This would enable the internationally important SPA and Ramsar sites to be extended by more than 200 hectares and enhance the nature conservation interest in the quarried land.
- **Controlled access across parts of the restored areas could be provided** – this would enable greater enjoyment of wildlife for interest groups and the general public.
- **Preserving knowledge for future generations** – Working of the extension resources would occur in tandem with University-led research studies of the geomorphology of the SSSI, self-funded by the material released. This would enable current and future generations to have access to further knowledge and understanding of the evolution and occupation of the Romney Marsh. Funding to allow such research may never again be available.

FOR MORE INFORMATION

email: planning.department@brett.co.uk

telephone: **01227 829000**

www.brett.co.uk



Aggregates from the quarry are recognised within the building and construction industry for their quality and are regularly used in housing and highways developments in the area. Other projects recently supplied include the building of sea wall defences at Camber Sands, the development of a helicopter Search and Rescue hangar at Lydd airport and the construction of a Nitrogen plant at Dungeness power station. Our products can be found in local DIY chain stores such as Travis Perkins and Jewson, caravan bases at local holiday parks and can be even found on the beach at Lydd.

On behalf of Whetsted Residents in respect of the M10 and M13 sites at Stonecastle Farm

Sent: 27 November 2018 16:00

Subject: *** URGENT *** OBJECTIONS - KCC MINERAL PLAN - FROM RESIDENTS OF WHETSTED

Dear Councillor Hills

I am writing this email to express the concerns of several residents who reside in the community of Whetsted regarding the proposed further development of sites at Stonecastle Quarry.

I live at the Oast House, Stonecastle Farm and have been actively involved with the mining operators for more than twenty years. This was with Redland, later Lafarge and now Tarmac. The mining at Stonecastle Quarry ceased around 2008 due to the viability of the minerals and general economic conditions. Tarmac have now decided to commence operations to extract minerals from the areas prescribed under the terms of the planning permission KCC1599A granted in 2002 with recent amendments.

We wish to lodge our objection to the site M13 Stonecastle extension, Hadlow and site M10 Moat Farm which are included in the Kent Mineral Review Plan that is being considered tomorrow at the Environment and Transport Cabinet Committee.

The reasons are :-

A – We have been informed by members of Tarmac’s site management team that the mineral reserves at these sites are of low grade and have a limited use.

B - The junction of the Access Road/Whetsted Road/A228 has become a notorious blackspot. The current operations are being assessed by KCC Highways due to the vast increase in HGV traffic already envisaged. Any further increase resulting from the proposed additional sites M13 and M10 would present a substantial, potentially fatal, danger to road users. Last year a Tarmac lorry overturned at the A228 junction and spilt aggregate.

C - The area of Stonecastle is now included in the Environment Agency’s flood plan (Zone 3) which was not the case when the current permission was granted in 2002. Any further development should only be considered after a full Flood Risk Assessment that includes both the impact of the current extraction plan and the proposed new sites.

D – Local residents have already raised several issues with Tarmac/KCC regarding the levels of noise and dust pollution from the current extraction plan. The Stonecastle Liaison Committee is being formed which will hopefully determine appropriate measures. Any further development should only be considered after these measure have been implemented. The local communities are extremely concerned about the levels of noise and dust that would potentially continue for decades.

E - I am aware of the ecology report that is now being prepared but a full assessment of the environmental impact on the established lakes and surrounding areas is needed. These areas have returned to nature over the ten years since mining ceased in 2008 and the original assessments need updating. Any further development should only be considered after a full Environmental Impact Assessment that includes both the current extraction plan and the proposed new sites M13 and M10.

F – The proposed M10 Stonecastle extension (Phases 3 and 6 of the original plan) was rejected by the planning committee back in 2002. All the issues considered in that decision still apply – with the addition of increased flood and road safety risks.

I would appreciate receiving a reply confirming safe receipt of our objections

Ryarsh Protection Group in respect of M8 West Malling Site

A copy of the Protection Group's document ' Why Ryarsh is an inappropriate location for the proposed M8 quarry development. A copy of this document is already included in the papers at Appendix 3 to the Minerals Sites Plan – Mineral Site Assessment 2018

In addition ETCC was advised that a petition opposing the development with 3,615 signature was submitted to the House of Commons in November 2018.

Legal Opinion from Borough Green Sandpits, the promoter of the M8 West Malling Site in the form of a legal opinion dated 27th November 2018

ROUGHETTS SANDPIT, WEST MALLING, KENT ADVICE

1. I am asked to advise Borough Green Sandpits ("BGS") in relation to its promotion of a site at Roughetts Sandpit, West Malling, Kent ("the Site"). The Site has been promoted for allocation within the Kent Mineral Sites Plan ("KMSP"). The KMSP is due for consideration by the minerals planning authority Kent County Council ("KCC")

ROUGHETTS SANDPIT, WEST MALLING, KENT ADVICE

1. I am asked to advise Borough Green Sandpits ("BGS") in relation to its promotion of a site at Roughetts Sandpit, West Malling, Kent ("the Site"). The Site has been promoted for allocation within the Kent Mineral Sites Plan ("KMSP"). The KMSP is due for consideration by the minerals planning authority Kent County Council ("KCC") shortly, in its pre-submission draft form. The Site is not included within the KMSP.

2. Having undertaken a call for sites and a site selection exercise, KCC is proposing to allocate another site, rejecting the Site on the basis of Green Belt impacts due to the impacts on the openness of the Green Belt caused by landscape mitigation bunds, extraction machinery, and lorries.

3. The reasoning is set out in detail in the evidence base document, the Mineral Site Assessment (2018)("MSA"), at page 83:

The site is within the Metropolitan Green Belt. Mineral extraction is not considered on its own to be inappropriate development, however structures such as bunds, plant and machinery which may impact the openness of the Green Belt can be considered to be inappropriate development. Restoration of the site by backfilling with inert materials would comprise inappropriate development. In accordance with national and local policy an assessment of whether 'very special circumstances' exist that would allow the development within the Green Belt is required. This assessment is set out in Appendix 2 and considers whether other considerations would outweigh the harm to the openness of the Green Belt or any other harm. This assessment concludes that while restoration of the mineral working by infilling to existing ground levels would constitute inappropriate development, it is considered that very special circumstances exist to override the presumption against this particular inappropriate development within the Green Belt. However, activities associated with the minerals extraction activity also constitute inappropriate development and, by virtue of the fact that the need for the development (supply of soft sand) could be met at an alternative site outside of the Green Belt, it is considered that very special circumstances do not exist to override the presumption against inappropriate development in the Green Belt and allocation of this site in this location would therefore be inconsistent with local and national Green Belt policy.

4. Appendix 2 to the MSA identifies that the minerals extraction activity at the Site would not undermine any of the five Green Belt 'purposes' (paragraph 4.7, page 179). It refers to some

case law in support of the proposition that openness has a visual element and then says this (paragraph 4.9):

Again, the inclusion of mineral extraction in the list of potential development that can be considered appropriate development supports the view that mineral excavation is capable of meeting the NPPF policy text and that mineral extraction per-se does not automatically mean that all mineral extraction would impact upon openness such that it is considered inappropriate. To conclude that all mineral extraction is inappropriate would make the policy wording in the NPPF meaningless. Consideration needs to be given on a case-by-case basis, taking into account the various bunds, proposed to screen the development, access and parking, site offices and welfare facilities, plant, screener and stockpiles.

In a context where landscape is generally well enclosed, and where the predominant effect of development would be to reduce existing grounds levels, it is unlikely that, by themselves, the activity of extracting the mineral and the resulting void would result in a reduction in openness to the extent that it would be material to the openness of the Green Belt. However, there is potential that a negative impact would arise due to the location and layout of the site compound, material stockpiles, processing plant, movement of HGVs accessing the site and screening requirements. In respect of the site offices and welfare facilities, these would be located within a single storey unit at current ground level. Mobile plant, a screener and stockpiles would also be located at current ground level during the first 6-12 months of the development. The supporting text to policy DM4 of the Kent Minerals and Waste Local Plan, specifically recognises that *“processing plant, although commonly associated with mineral extraction, is considered unlikely to preserve openness, owing to its size, height and industrial appearance and would therefore be inappropriate development”*. Similarly, the introduction of offices and welfare facilities and the movement of HGVs accessing the site and parking arrangements would introduce urbanising features into the countryside which would have a negative impact on openness for the duration of the works – ie 29 years. Depending on their height and location, material stockpiles could also impact on openness. Three-metre high screening bunds, together with tree planting, are proposed to mitigate the visual effect of the development for the lifetime of the activities (minimum 24 years), however, I consider that they will impact on the openness of the Green Belt for a significant period of time.”

5. The references to appropriate/inappropriate are to what is now paragraph 146 of the National Planning Policy Framework (“NPPF”), which provides that *certain other forms of development are also not inappropriate in the Green Belt provided that preserve its openness and do not conflict with the purposes of including land within it. These are (a) mineral extraction...*”

6. The case law referred to in Appendix A to the MSA includes the leading case of *R(Samuel Smith Old Brewery (Tadcaster) and Oxtan Farm) v North Yorkshire County Council* [2018] EWCA Civ 489. That case held that the (identical provisions of the 2012 NPPF) “implicitly requires the decision maker to consider how those visual effects bear on the question of whether the development would ‘preserve the openness of the Green Belt’”.

7. I now consider whether there is anything objectionable in the MSA reasoning.

Inherent parts of the minerals operation

8. Although it is true to say that one cannot simply assume that all minerals extraction projects are 'not inappropriate' (because of the proviso "provided they preserve ... openness"), it is not right to say that landscaping, extraction plant, vehicles and ancillary buildings should all be taken into account when assessing impact on openness.

9. Paragraph 146(a) covers all minerals extraction, both subterranean and that comprising surface extraction. It would make little sense if the NPPF excluded minerals extraction from the ambit of 'inappropriate development', but then put it back into that category on the basis of aspects of mineral extraction that form an inherent, universal, part of the minerals extraction in question.

10. Assessing on a case-by-case basis whether the diggers actually carrying out the extraction harmed openness would not, it seems to me, be an exercise rationally consistent with the NPPF, as long as the diggers were not somehow out of the ordinary (eg many times bigger and taller than the usual type of diggers associated with that form of mineral extraction). The approach that KCC takes in the MSA and in the report to committee does, however, approach the question in that way, judging the following to cause harm to openness:

- (1) the extraction activity itself and associated plant and machinery including screeners;
- (2) bunds
- (3) stockpiles
- (4) access and parking areas
- (5) site offices and welfare buildings

11. There is no suggestion that the Site would be the subject of anything unusual where these activities, items and buildings are concerned. As the High Court said in *Europa Oil & Gas Ltd v Secretary of State for Communities and Local Government* [2013] EWHC 2643,

"... some level of operational development for mineral extraction, sufficiently significant as operational development to require planning permission has to be appropriate and necessarily in the Green Belt without compromising the two objectives. Were it otherwise, the proviso would always negate the appropriateness of any mineral extraction in the Green Belt and simply make the policy pointless. Extraction is generally not devoid of structures, engineering works and associated buildings. The policy was not designed to cater for fanciful situations but for those generally encountered in mineral extraction."

12. Despite making a passing reference to this case in Appendix A to the MSA, KCC has apparently not recognised that to consider run-of-the-mill aspects of mineral extraction like screeners and site offices in the way they do is contrary to the guidance given by the High Court in the *Europa Oil & Gas* case.

13. In my view, the analysis in the MSA, and in the Committee report, which underpins the judgement reached excluding the Site from allocation, is flawed and should be reconsidered on a proper legal basis before the allocations process goes any further. Not to do so would be liable to render the emerging KMSP unsound.



Kent Minerals Site Plan - Advice Note

Background

Shortly prior to the Environment and Transport Cabinet Committee on 28 November, KCC received correspondence from the promotor of the West Malling Sandpit site (known as Roughetts Sandpit) which enclosed a legal opinion from Rupert Warren QC of Landmark Chambers.

The opinion referred to the Europa Oil and Gas case and concluded that the way in which consideration had been given to the run-of-the-mill aspects of mineral extraction like screeners and site offices was contrary to the guidance given by the High Court in that case. A copy of the advice was provided in full to Cabinet Committee.

Further to Cabinet Committee, advice was sought from Isabella Tafur, Counsel at Francis Taylor Buildings. Ms Tafur has previously provided advice to KCC in respect of the Minerals Plan Site Plan. Initial advice was provided in a teleconference on 30 November. The teleconference was followed by a written opinion issued on 2nd December.

A copy of the opinion is appended, and the advice therein is summarised below.

Summary of the Opinion

1. Contrary to the opinion expressed at paragraph 8 of Rupert Warren's Advice, it is right that the Minerals Sites Assessment ("MSA") should consider all aspects of the proposed development, including the extraction works themselves, landscaping, extraction plant, vehicles and ancillary buildings in order to determine whether the proposed works constitute inappropriate development.
2. It is open to KCC to determine that the development fails to preserve openness and is therefore inappropriate. However, given that all of the features identified by the MSA on the West Malling Site will ordinarily be present in mineral development, further explanation should be provided as to why, in this particular instance, they render the development inappropriate.



3. In short, if bunds and extraction plant were sufficient to render mineral development inappropriate in the Green Belt, then all mineral development would be inappropriate and the exception in paragraph 146 of the (revised) NPPF would be of no effect.

4. It would be useful to provide further explanation of why the presence of the proposed works and infrastructure on this particular Site render inappropriate that which, on another Green Belt site, may be appropriate. This may be due to the duration of the works, the extent of the working area, the particular sensitivity of the Site or the specific visual impacts that will arise. Whatever the reason, the judgment that the proposed development would fail to preserve the openness of the Green Belt would benefit from further explanation.

Pursuant to the teleconference, I understand that further consideration of green belt matters in respect of the West Malling site is being undertaken, and that Members will be provided with an update in respect of the same at Cabinet on 3rd December.

Sarah Bonser
Senior Solicitor and Head of Planning & Highways
Invicta Law

2nd December 2018

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IN THE MATTER OF KENT MINERALS SITES PLAN
PROPOSED OMISSION OF WEST MALLING SANDPIT (SITE M8)

ADVICE

Introduction

1. I am asked to advise Kent County Council (“**KCC**”) in respect of its draft Kent Minerals Sites Plan (“**the Draft Plan**”) which is due to be considered by KCC’s Cabinet Committee on 3rd December 2018.

2. The Draft Plan proposes the allocation of a soft sand mineral site at Chapel Farm. It does not propose the allocation of a second soft sand site at Ryarsh, West Malling (“**the West Malling Site**”)¹ on the basis of its Green Belt impacts. That decision is informed by an assessment of the Site in the Minerals Sites Assessment 2018 (“**MSA**”) and in particular, Appendix 2 to that Assessment.

3. The promoter of the West Malling Site has submitted an Advice by Rupert Warren QC dated 27 November 2018 (“**the RW Advice**”) which suggests that the analysis in KCC’s MSA is flawed. It argues that the decision should be reconsidered before the allocations progress any further to ensure that the Draft Plan is sound.

4. I am asked to consider the criticisms raised in the RW Advice and to advise KCC on their merits and any further work that should be undertaken to inform the allocations in the Draft Plan.

¹ Also referred to as Site ‘M8’ in the KCC’ Mineral Site Assessment 2018

Summary of Advice

5. In my view, and contrary to the opinion expressed at paragraph 8 of the RW Advice, it is right that the MSA should consider all aspects of the proposed development, including the extraction works themselves, landscaping, extraction plant, vehicles and ancillary buildings in order to determine whether the proposed works constitute inappropriate development.
6. It is open to KCC to determine that the development fails to preserve openness and is therefore inappropriate. However, given that all of the features identified by the MSA on the West Malling Site will ordinarily be present in mineral development, further explanation should be provided as to why, in this particular instance, they render the development inappropriate.
7. In short, if bunds and extraction plant were sufficient to render mineral development inappropriate in the Green Belt, then all mineral development would be inappropriate and the exception in paragraph 146 of the (revised) NPPF would be of no effect.
8. It would be useful to provide further explanation of why the presence of the proposed works and infrastructure on this particular Site render inappropriate that which, on another Green Belt site, may be appropriate. This may be due to the duration of the works, the extent of the working area, the particular sensitivity of the Site or the specific visual impacts that will arise. Whatever the reason, the judgment that the proposed development would fail to preserve the openness of the Green Belt would benefit from further explanation.

Advice

9. Paragraph 146 of the NPPF makes it clear that mineral development will not be inappropriate provided it maintains the openness of the Green Belt and does not conflict with its purposes. The NPPF plainly envisages that some mineral development may harm openness but that it will not inevitably do so.

10. Any assessment of mineral extraction must therefore start from the premise that there is nothing inherent in the features commonly found in mineral extraction sites which would inevitably harm openness or conflict with Green Belt purposes². Following the Europa Oil approach, features which are “generally encountered” in the context of the mineral extraction cannot without anything more cause a particular proposal to be inappropriate on the grounds of openness. In Europa, this meant the “*structures, engineering works, and associated buildings ... generally encountered in mineral extraction*” or “*the common structural paraphernalia for mineral extractions cannot cause the development to be inappropriate.*”³.
11. Preserving the openness of the Green Belt does not mean ensuring that there is no physical change to it as a result of the development. Otherwise the policy would be unworkable since mineral extraction will almost always involve physical change (such as the extraction works themselves; bunds; landscape planting; and plant for example). A proposal may result in some reduction in the openness of the Green Belt whilst still “preserving the openness” of the Green Belt as required by paragraph 146 of the NPPF.⁴
12. In determining whether a particular mineral proposal harms the openness of the Green Belt, both its visual and spatial aspects will be relevant. The decision-maker must consider all aspects of the proposed development – including the extraction itself and any associated infrastructure and activity – and form a judgment as to whether the development harms openness. In my view it is not correct to say⁵ that “*landscaping, extraction plant, vehicles and ancillary buildings*” should all be left out of account in forming that judgment. All aspects of the proposed development should be taken into account in forming the judgment as to impact on openness.
13. It is then a matter of judgment for the decision-maker whether a particular proposal constitutes inappropriate or appropriate development in the Green Belt. Provided all relevant matters are taken into account, that judgment will be subject to challenge only on rationality grounds.

² Europa Oil and Gas Ltd v SSCLG [2013] EWHC 2643 (Admin) at [64]

³ See High Court decision in Europa Oil at [65] and [75] and Court of Appeal decision in Europa Oil [2014] EWCA Civ 825 at [38]

⁴ Samuel Smith, paragraph 60

⁵ As Rupert Warren does at paragraph 8 of his Advice

14. In determining whether a potentially appropriate development is in fact inappropriate, the following factors are likely to be relevant:

- a) The duration of the proposed development and the reversibility of its effects⁶. A short operation that fully restores the landscape in such a way as to preserve its openness is more likely to constitute appropriate development than a longer-term proposal that causes some permanent harm to the visual or spatial openness of the Green Belt. In this case the proposed operations will take place for some 24 years. Plainly this is a considerable length of time which may be used to support a finding of inappropriateness. I note that in the Samuel Smith case the proposed seven-year operations over six hectares were described by the Court of Appeal as “*a substantial extension to a large existing quarry, with a lengthy period of working and restoration*”⁷. The proposed working of the West Malling site is significantly larger (extending to some 12 hectares) and would be worked for a considerably longer period than the proposal under consideration in the Samuel Smith case.
- b) The physical extent of the proposed workings and the character and topography of the site;
- c) The visual impact of the development⁸. If the site is particularly visible or apparent in important views, then that might suggest that mineral extraction could not be accommodated without harming the openness of the Green Belt. As the Court of Appeal recognised in Samuel Smith mineral extraction will often have long-lasting effects visual effects on the openness of the Green Belt, which may be partly or wholly repaired in the restoration phase – or may not: whether the visual impacts of a particular project of mineral working would be such as to harm the openness of the Green Belt is, classically, a matter of planning judgment⁹. In that case it was recognised that the development would result in a permanent

⁶ Europa Oil at [67]

⁷ Samuel Smith Old Brewery (Tadcaster) v North Yorkshire CC [2018] EWCA Civ 489 at [3] and [42]

⁸ Samuel Smith

⁹ Samuel Smith at [39]

change to the landscape¹⁰ and that the bunding and landscape screening would close-off long distance views which were factors that should have been taken into account in the assessment of impacts on openness¹¹. In Samuel Smith, the landscape officer had not objected to the scheme but had identified a number of aspects that were harmful to the landscape and visual amenity of the area and which the Court considered should have been factored into the judgment on openness.

- d) The particular Green Belt purposes served by the site in question. Some purposes, such as preserving the setting and special character of historic towns for example, may be especially relevant to a particular site such that mineral extraction on the site would compromise that purpose.
- e) The proportionality of the proposed physical works and site infrastructure. A proposal that includes more physical works or infrastructure than strictly necessary is more likely to constitute inappropriate development than one that contains the minimum of physical works and infrastructure. The proposed height of bunds or mitigation planting; the extent of the proposed working area and the plant and infrastructure proposed may be relevant factors in determining whether the proposal is appropriate in the Green Belt.
- f) The fact that minerals can only be extracted where they are found such that the development has to take place in the Green Belt¹². If there are other non-Green Belt sites where the requisite minerals can be extracted, this will be relevant to the question of whether a proposal on a Green Belt site constitutes inappropriate development. In this case there is another site outside the Green Belt capable of meeting all of the currently identified need for soft sand in Kent. It may be that in light of the existence of another non-Green Belt site, all of the proposed working on the West Malling Site (i.e. the extraction itself and all associated development) constitutes inappropriate development.

¹⁰ Samuel Smith at [42]

¹¹ Samuel Smith at [43]

¹² Europa Oil, paragraph 67

15. In my view, the objection from the operators of the West Malling site should be used as an opportunity to carry out further work to justify the conclusion that the proposed mineral extraction would constitute inappropriate development. This should involve a careful analysis of all elements of the proposed development (extraction, bunds, plant and all infrastructure and activity).

16. The additional work should revisit the conclusions of the MSA to see whether they remain robust in light of this Advice and in particular, given the existence of an alternative non-Green Belt site, whether any of the proposed elements of the extraction works on the West Malling Site can be considered to be appropriate

Conclusion

17. My conclusions are set out in the Summary of Advice above.

Isabella Tafur
Francis Taylor Building
Inner Temple
London EC4Y 7BY

2nd December 2018