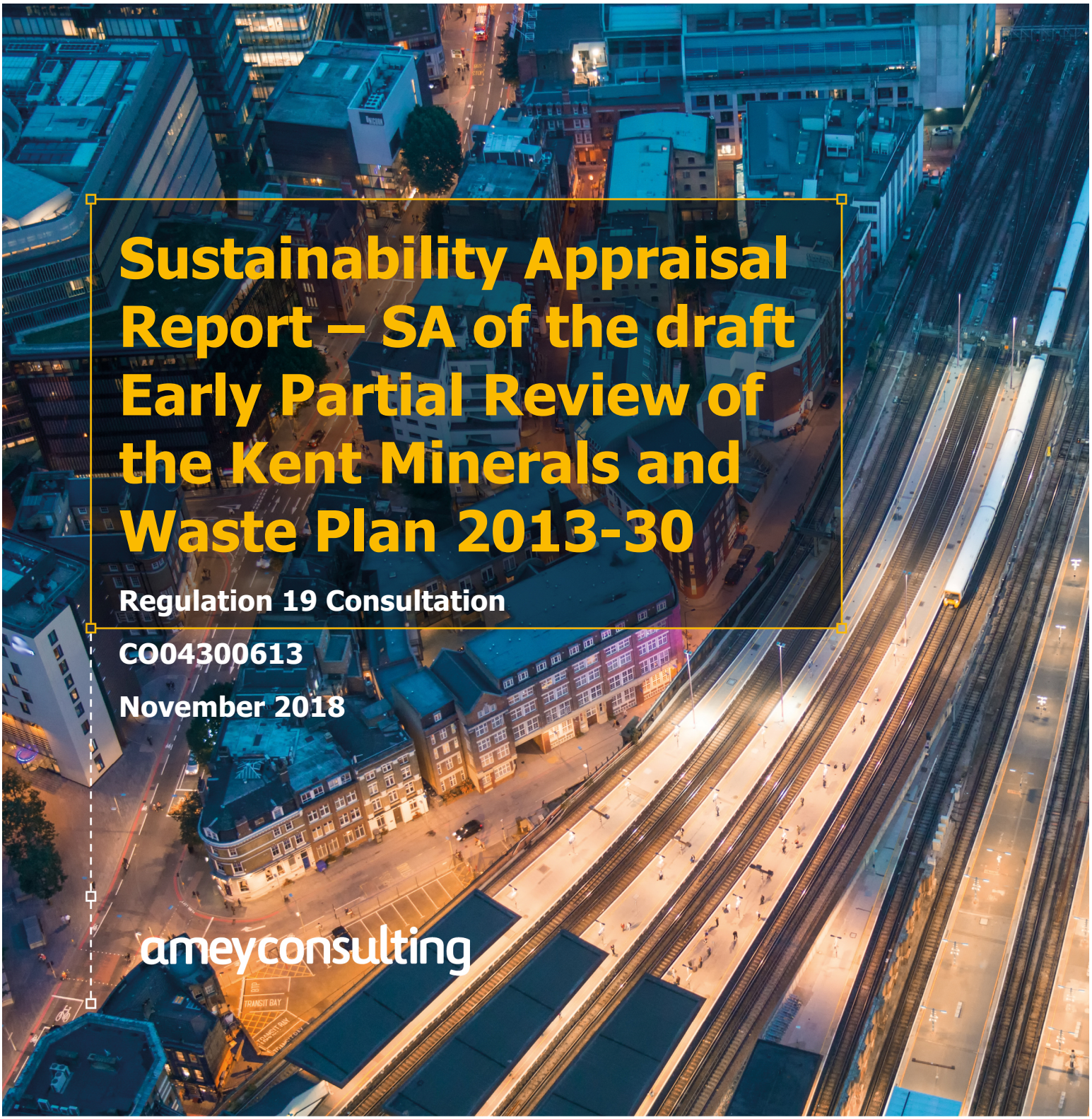

Sustainability Appraisal Report – SA of the draft Early Partial Review of the Kent Minerals and Waste Plan 2013-30

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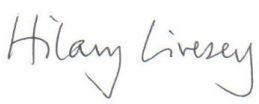
Rev 0	Name: Taylor, Jenefer Signature:  Date: 1/11/18	Name: Jenefer Taylor Signature:  Date: 15/11/18	Name: Mike Comerford Signature:  Date: 19/11/18
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Executive Summary

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 wiill 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 appraised against this set of sustainability objectives and the findings of that appraisal are set out in the report.

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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 lead 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 Review[1]. 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	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 – 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	Address the causes of climate change through reducing emissions of greenhouse gases through energy efficiency and energy generated from renewable sources – 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	Support efforts to create and sustain sustainable communities, particularly the improvement of health and well-being; and support the delivery of housing targets – 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 groURS 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 – 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.

	Sustainability Objective								
Policy	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 KWMLP: 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 now?	"**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 without 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 3Questions 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 Report[2].

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 review[3] 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 Report[4] 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 Waste[5] []

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 England[6]

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 flow s 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 link s, 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 2018[7]. 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 lead 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 Review[9]. 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 Estaury 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 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 Report[10] 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	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 – 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	Address the causes of climate change through reducing emissions of greenhouse gases through energy efficiency and energy generated from renewable sources – 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	Support efforts to create and sustain sustainable communities, particularly the improvement of health and well-being; and support the delivery of housing targets – 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 groURS 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

			– 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 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.

	Sustainability Objective								
Policy	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): • 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: M / Dir/Ind: I / Rev?: 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: M / Dir/Ind: D / Rev?: Y

<table>
<tr><td></td><td></td><td>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.</td></tr>
<tr><td>3</td><td>Community and well-being</td><td><table><tr><th>Short</th><th>Med</th><th>Long</th><th>Prob</th><th>Dir/Ind</th><th>Rev?</th></tr><tr><td>+</td><td>+</td><td>?</td><td>M</td><td>I</td><td>Y</td></tr></table>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.</td></tr>
<tr><td>4</td><td>Sustainable economic growth</td><td><table><tr><th>Short</th><th>Med</th><th>Long</th><th>Prob</th><th>Dir/Ind</th><th>Rev?</th></tr><tr><td>++</td><td>++</td><td>?</td><td>M</td><td>D</td><td>Y</td></tr></table>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..</td></tr>
<tr><td>5</td><td>Flood risk</td><td><table><tr><th>Short</th><th>Med</th><th>Long</th><th>Prob</th><th>Dir/Ind</th><th>Rev?</th></tr><tr><td>0</td><td>0</td><td>0</td><td>H</td><td>I</td><td>N</td></tr></table>This change in policy is not specific to any particular sites, therefore is unlikely to have a demonstrable effect upon flood risk.</td></tr>
<tr><td>6</td><td>Land</td><td><table><tr><th>Short</th><th>Med</th><th>Long</th><th>Prob</th><th>Dir/Ind</th><th>Rev?</th></tr><tr><td>0</td><td>0</td><td>?</td><td>H</td><td>D</td><td>N</td></tr></table></td></tr>
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<table>
<tr><td></td><td></td><td>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.</td></tr>
<tr><td>7</td><td>Landscape and the historic environment</td><td><table><tr><td>Short</td><td>Med</td><td>Long</td><td>Prob</td><td>Dir/Ind</td><td>Rev?</td></tr><tr><td>0</td><td>0</td><td>?</td><td>H</td><td>D</td><td>N</td></tr></table>The amendment to policy is unlikely to have a significant effect on landscape or historic assets as no new developments will be required.</td></tr>
<tr><td>8</td><td>Transport</td><td><table><tr><td>Short</td><td>Med</td><td>Long</td><td>Prob</td><td>Dir/Ind</td><td>Rev?</td></tr><tr><td>?</td><td>?</td><td>?</td><td>L</td><td>D</td><td>N</td></tr></table>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.</td></tr>
<tr><td>9</td><td>Water</td><td><table><tr><td>Short</td><td>Med</td><td>Long</td><td>Prob</td><td>Dir/Ind</td><td>Rev?</td></tr><tr><td>0</td><td>0</td><td>?</td><td>H</td><td>D</td><td>N</td></tr></table>The amendment to policy is unlikely to have a significant effect on water quality and availability as no new developments will be required.</td></tr>
</table>

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.

<table>
<tr><td></td><td>Sustainability Objective</td><td>Comments</td></tr>
<tr><td rowspan="2">1</td><td rowspan="2">Biodiversity</td><td><table><tr><td>Short</td><td>Med</td><td>Long</td><td>Prob</td><td>Dir/Ind</td><td>Rev?</td></tr><tr><td>0</td><td>+</td><td>?</td><td>L</td><td>I</td><td>N</td></tr></table></td></tr>
<tr><td>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.</td></tr>
<tr><td rowspan="2">2</td><td rowspan="2">Climate change</td><td><table><tr><td>Short</td><td>Med</td><td>Long</td><td>Prob</td><td>Dir/Ind</td><td>Rev?</td></tr><tr><td>0</td><td>0</td><td>0</td><td></td><td></td><td></td></tr></table></td></tr>
<tr><td>Amendment to the policy will not affect climate change impacts of waste management.</td></tr>
<tr><td rowspan="2">3</td><td rowspan="2">Community and well-being</td><td><table><tr><td>Short</td><td>Med</td><td>Long</td><td>Prob</td><td>Dir/Ind</td><td>Rev?</td></tr><tr><td>0</td><td>?</td><td>+</td><td>M</td><td>I</td><td>N</td></tr></table></td></tr>
<tr><td>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.</td></tr>
<tr><td>4</td><td></td><td><table><tr><td>Short</td><td>Med</td><td>Long</td><td>Prob</td><td>Dir/Ind</td><td>Rev?</td></tr><tr><td>0</td><td>0</td><td>0</td><td></td><td></td><td></td></tr></table></td></tr>
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<table>
<tr><td></td><td>Sustainable economic growth</td><td>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.</td></tr>
<tr><td>5</td><td>Flood risk</td><td><table><tr><th>Short</th><th>Med</th><th>Long</th><th>Prob</th><th>Dir/Ind</th><th>Rev?</th></tr><tr><td>0</td><td>0</td><td>0</td><td></td><td></td><td></td></tr></table>The amendment to policy will not affect flood risk.</td></tr>
<tr><td>6</td><td>Land</td><td><table><tr><th>Short</th><th>Med</th><th>Long</th><th>Prob</th><th>Dir/Ind</th><th>Rev?</th></tr><tr><td>0</td><td>0</td><td>0</td><td></td><td></td><td></td></tr></table>The amendment to policy will not affect the efficient use of land or sensitive geomorphology</td></tr>
<tr><td>7</td><td>Landscape and the historic environment</td><td><table><tr><th>Short</th><th>Med</th><th>Long</th><th>Prob</th><th>Dir/Ind</th><th>Rev?</th></tr><tr><td>0</td><td>+</td><td>+</td><td>H</td><td>D</td><td>N</td></tr></table>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.</td></tr>
<tr><td>8</td><td>Transport</td><td><table><tr><th>Short</th><th>Med</th><th>Long</th><th>Prob</th><th>Dir/Ind</th><th>Rev?</th></tr><tr><td>0</td><td>0</td><td>0</td><td></td><td></td><td></td></tr></table>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.</td></tr>
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<table>
<tr><td rowspan="2">9</td><td rowspan="2">Water</td><td>
<table>
<tr><td>Short</td><td>Med</td><td>Long</td><td>Prob</td><td>Dir/Ind</td><td>Rev?</td></tr>
<tr><td>0</td><td>0</td><td>0</td><td></td><td></td><td></td></tr>
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</td></tr>
<tr><td>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.</td></tr>
</table>

CSW6: Location of built waste management facilities Removes reference to sites to be identified in the WSP

<table>
<tr><td></td><td>Sustainability Objective</td><td>Comments</td></tr>
<tr><td>1</td><td>Biodiversity</td><td>
<table>
<tr><td>Short</td><td>Med</td><td>Long</td><td>Prob</td><td>Dir/Ind</td><td>Rev?</td></tr>
<tr><td>0</td><td>0</td><td>0</td><td></td><td></td><td></td></tr>
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The change to the policy will have no effect on biodiversity.
</td></tr>
<tr><td>2</td><td>Climate change</td><td>
<table>
<tr><td>Short</td><td>Med</td><td>Long</td><td>Prob</td><td>Dir/Ind</td><td>Rev?</td></tr>
<tr><td>0</td><td>0</td><td>0</td><td></td><td></td><td></td></tr>
</table>
The change to the policy will have no effect on climate change.
</td></tr>
<tr><td>3</td><td>Community and well-being</td><td>
<table>
<tr><td>Short</td><td>Med</td><td>Long</td><td>Prob</td><td>Dir/Ind</td><td>Rev?</td></tr>
<tr><td>0</td><td>0</td><td>0</td><td></td><td></td><td></td></tr>
</table>
The change to the policy will have no effect on community and wellbeing.
</td></tr>
<tr><td>4</td><td>Sustainable economic growth</td><td>
<table>
<tr><td>Short</td><td>Med</td><td>Long</td><td>Prob</td><td>Dir/Ind</td><td>Rev?</td></tr>
<tr><td>0</td><td>0</td><td>0</td><td></td><td></td><td></td></tr>
</table>
The change to the policy will have no effect on sustainable economic growth.
</td></tr>
<tr><td>5</td><td>Flood risk</td><td>
<table>
<tr><td>Short</td><td>Med</td><td>Long</td><td>Prob</td><td>Dir/Ind</td><td>Rev?</td></tr>
<tr><td>0</td><td>0</td><td>0</td><td></td><td></td><td></td></tr>
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No effect on flood risk from change to the policy
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<table>
<tr><td>Short</td><td>Med</td><td>Long</td><td>Prob</td><td>Dir/Ind</td><td>Rev?</td></tr>
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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

<table>
<tr><td></td><td>Sustainability Objective</td><td>Comments</td></tr>
<tr><td>1</td><td>Biodiversity</td><td>
<table>
<tr><td>Short</td><td>Med</td><td>Long</td><td>Prob</td><td>Dir/Ind</td><td>Rev?</td></tr>
<tr><td>+</td><td>+</td><td>+</td><td>M</td><td>I</td><td>Y</td></tr>
</table>
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.
</td></tr>
<tr><td>2</td><td>Climate change</td><td>
<table>
<tr><td>Short</td><td>Med</td><td>Long</td><td>Prob</td><td>Dir/Ind</td><td>Rev?</td></tr>
<tr><td>+</td><td>+</td><td>+</td><td>M</td><td>D</td><td>Y</td></tr>
</table>
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.
</td></tr>
<tr><td>3</td><td>Community and well-being</td><td>
<table>
<tr><td>Short</td><td>Med</td><td>Long</td><td>Prob</td><td>Dir/Ind</td><td>Rev?</td></tr>
<tr><td>+</td><td>+</td><td>+</td><td>M</td><td>I</td><td>Y</td></tr>
</table>
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.
</td></tr>
<tr><td>4</td><td></td><td>
<table>
<tr><td>Short</td><td>Med</td><td>Long</td><td>Prob</td><td>Dir/Ind</td><td>Rev?</td></tr>
<tr><td>+</td><td>+</td><td>+</td><td>H</td><td>D</td><td>Y</td></tr>
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<table>
<tr><td></td><td>Sustainable economic growth</td><td>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.</td></tr>
<tr><td rowspan="2">5</td><td rowspan="2">Flood risk</td><td><table><tr><th>Short</th><th>Med</th><th>Long</th><th>Prob</th><th>Dir/Ind</th><th>Rev?</th></tr><tr><td>0</td><td>0</td><td>0</td><td></td><td></td><td></td></tr></table></td></tr>
<tr><td>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.</td></tr>
<tr><td rowspan="2">6</td><td rowspan="2">Land</td><td><table><tr><th>Short</th><th>Med</th><th>Long</th><th>Prob</th><th>Dir/Ind</th><th>Rev?</th></tr><tr><td>0</td><td>0</td><td>0</td><td></td><td></td><td></td></tr></table></td></tr>
<tr><td>The policy does not deal with the location of facilities and therefore will have no impact on land use.</td></tr>
<tr><td rowspan="2">7</td><td rowspan="2">Landscape and the historic environment</td><td><table><tr><th>Short</th><th>Med</th><th>Long</th><th>Prob</th><th>Dir/Ind</th><th>Rev?</th></tr><tr><td>0</td><td>0</td><td>0</td><td></td><td></td><td></td></tr></table></td></tr>
<tr><td>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.</td></tr>
<tr><td rowspan="2">8</td><td rowspan="2">Transport</td><td><table><tr><th>Short</th><th>Med</th><th>Long</th><th>Prob</th><th>Dir/Ind</th><th>Rev?</th></tr><tr><td>?</td><td>?</td><td>0</td><td>M</td><td>D</td><td>Y</td></tr></table></td></tr>
<tr><td>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.</td></tr>
</table>

<table>
<tr>
<td>9</td>
<td>Water</td>
<td>
<table>
<tr><th>Short</th><th>Med</th><th>Long</th><th>Prob</th><th>Dir/Ind</th><th>Rev?</th></tr>
<tr><td>0</td><td>0</td><td>0</td><td></td><td></td><td></td></tr>
</table>

The change in policy does not address the locations or effects of development therefore is unlikely to affect water quality and availability.
</td>
</tr>
</table>

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

<table>
<tr><td></td><td>Sustainability Objective</td><td>Comments</td></tr>
<tr><td>1</td><td>Biodiversity</td><td>
<table>
<tr><td>Short</td><td>Med</td><td>Long</td><td>Prob</td><td>Dir/Ind</td><td>Rev?</td></tr>
<tr><td>+</td><td>+</td><td>?</td><td>M</td><td>I</td><td>Y</td></tr>
</table>
By promoting energy recovery and recovery of heat, the policy will help to miminise greenhouse gas emissions which will contribute to reducing the pressure on biodiversity from climate change.
</td></tr>
<tr><td>2</td><td>Climate change</td><td>
<table>
<tr><td>Short</td><td>Med</td><td>Long</td><td>Prob</td><td>Dir/Ind</td><td>Rev?</td></tr>
<tr><td>+</td><td>+</td><td>+</td><td>M</td><td>D</td><td>Y</td></tr>
</table>
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.
</td></tr>
<tr><td>3</td><td>Community and well-being</td><td>
<table>
<tr><td>Short</td><td>Med</td><td>Long</td><td>Prob</td><td>Dir/Ind</td><td>Rev?</td></tr>
<tr><td>+</td><td>+</td><td>+</td><td>M</td><td>I</td><td>Y</td></tr>
</table>
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.
</td></tr>
<tr><td>4</td><td>Sustainable economic growth</td><td>
<table>
<tr><td>Short</td><td>Med</td><td>Long</td><td>Prob</td><td>Dir/Ind</td><td>Rev?</td></tr>
<tr><td>+</td><td>+</td><td>+</td><td>H</td><td>D</td><td>N</td></tr>
</table>
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.
</td></tr>
<tr><td></td><td></td><td>
<table>
<tr><td>Short</td><td>Med</td><td>Long</td><td>Prob</td><td>Dir/Ind</td><td>Rev?</td></tr>
</table>
</td></tr>
</table>

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? 0 0 0 The amendment to policy is unrelated to land use.
7	Landscape and the historic environment	Short Med Long Prob Dir/Ind Rev? 0 0 0 The amendment to policy is unrelated to protection and enhancement of landscape and the historic environment.
8	Transport	Short Med Long Prob Dir/Ind Rev? 0 0 0 The amendment to policy is unrelated to sustainable transport objeictves.
9	Water	Short Med Long Prob Dir/Ind Rev? 0 0 0 The amendment to policy is unrelated to maintenance and improvement of water quality or sustainable water resource management.

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: 0 | Med: 0 | Long: 0 | Prob: | Dir/Ind: | Rev?: No effect on biodiversity from change to the policy
2	Climate change	Short: 0 | Med: 0 | Long: 0 | Prob: | Dir/Ind: | Rev?: No effect on climate change from change to the policy
3	Community and well-being	Short: 0 | Med: 0 | Long: 0 | Prob: | Dir/Ind: | Rev?: No effect on community and wellbeing from change to the policy
4	Sustainable economic growth	Short: 0 | Med: 0 | Long: 0 | Prob: | Dir/Ind: | Rev?: No effect on sustainable economic growth from change to the policy
5	Flood risk	Short: 0 | Med: 0 | Long: 0 | Prob: | Dir/Ind: | Rev?: No effect on flood risk from change to the policy
6	Land	Short: 0 | Med: 0 | Long: 0 | Prob: | Dir/Ind: | Rev?:

<table>
<tr><td></td><td></td><td>No effect on land use from change to the policy</td></tr>
<tr><td rowspan="2">7</td><td rowspan="2">Landscape and the historic environment</td><td><table><tr><th>Short</th><th>Med</th><th>Long</th><th>Prob</th><th>Dir/Ind</th><th>Rev?</th></tr><tr><td>0</td><td>0</td><td>0</td><td></td><td></td><td></td></tr></table></td></tr>
<tr><td>No effect on landscape and the historic environment from change to the policy</td></tr>
<tr><td rowspan="2">8</td><td rowspan="2">Transport</td><td><table><tr><th>Short</th><th>Med</th><th>Long</th><th>Prob</th><th>Dir/Ind</th><th>Rev?</th></tr><tr><td>0</td><td>0</td><td>0</td><td></td><td></td><td></td></tr></table></td></tr>
<tr><td>No effect on transport from change to the policy</td></tr>
<tr><td rowspan="2">9</td><td rowspan="2">Water</td><td><table><tr><th>Short</th><th>Med</th><th>Long</th><th>Prob</th><th>Dir/Ind</th><th>Rev?</th></tr><tr><td>0</td><td>0</td><td>0</td><td></td><td></td><td></td></tr></table></td></tr>
<tr><td>No effect on water quality and sustainable water resource management from change to the policy</td></tr>
</table>

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: 0 | Med: 0 | Long: 0 | Prob: | Dir/Ind: | Rev?: No effect on biodiversity from change to the policy
2	Climate change	Short: 0 | Med: 0 | Long: 0 | Prob: | Dir/Ind: | Rev?: No effect on climate change from change to the policy
3	Community and well-being	Short: 0 | Med: 0 | Long: 0 | Prob: | Dir/Ind: | Rev?: No effect on community and wellbeing from change to the policy
4	Sustainable economic growth	Short: 0 | Med: 0 | Long: 0 | Prob: | Dir/Ind: | Rev?: No effect on sustainable economic growth from change to the policy
5	Flood risk	Short: 0 | Med: 0 | Long: 0 | Prob: | Dir/Ind: | Rev?: No effect on flood risk from change to the policy
6	Land	Short: 0 | Med: 0 | Long: 0 | Prob: | Dir/Ind: | Rev?:

<table>
<tr><td></td><td></td><td>No effect on land use from change to the policy</td></tr>
<tr><td rowspan="2">7</td><td rowspan="2">Landscape and the historic environment</td><td><table><tr><th>Short</th><th>Med</th><th>Long</th><th>Prob</th><th>Dir/Ind</th><th>Rev?</th></tr><tr><td>0</td><td>0</td><td>0</td><td></td><td></td><td></td></tr></table></td></tr>
<tr><td>No effect on landscape and the historic environment from change to the policy</td></tr>
<tr><td rowspan="2">8</td><td rowspan="2">Transport</td><td><table><tr><th>Short</th><th>Med</th><th>Long</th><th>Prob</th><th>Dir/Ind</th><th>Rev?</th></tr><tr><td>0</td><td>0</td><td>0</td><td></td><td></td><td></td></tr></table></td></tr>
<tr><td>No effect on transport from change to the policy</td></tr>
<tr><td rowspan="2">9</td><td rowspan="2">Water</td><td><table><tr><th>Short</th><th>Med</th><th>Long</th><th>Prob</th><th>Dir/Ind</th><th>Rev?</th></tr><tr><td>0</td><td>0</td><td>0</td><td></td><td></td><td></td></tr></table></td></tr>
<tr><td>No effect on water quality and sustainable water resource management from change to the policy</td></tr>
</table>

Policy DM 7 Safeguarding Mineral Resources Strengthens the requirement on sites allocated in adopted local development plans to avoid needless sterilisation of minerals

<table>
<tr><td></td><td>Sustainability Objective</td><td>Comments</td></tr>
<tr><td>1</td><td>Biodiversity</td><td><table><tr><td>Short</td><td>Med</td><td>Long</td><td>Prob</td><td>Dir/Ind</td><td>Rev?</td></tr><tr><td>0</td><td>0</td><td>0</td><td></td><td></td><td></td></tr></table>No effect on biodiversity from change to the policy</td></tr>
<tr><td>2</td><td>Climate change</td><td><table><tr><td>Short</td><td>Med</td><td>Long</td><td>Prob</td><td>Dir/Ind</td><td>Rev?</td></tr><tr><td>0</td><td>0</td><td>0</td><td></td><td></td><td></td></tr></table>No effect on climate change from change to the policy</td></tr>
<tr><td>3</td><td>Community and well-being</td><td><table><tr><td>Short</td><td>Med</td><td>Long</td><td>Prob</td><td>Dir/Ind</td><td>Rev?</td></tr><tr><td>++</td><td>++</td><td>?</td><td>H</td><td>D</td><td>Y</td></tr></table>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.</td></tr>
<tr><td>4</td><td>Sustainable economic growth</td><td><table><tr><td>Short</td><td>Med</td><td>Long</td><td>Prob</td><td>Dir/Ind</td><td>Rev?</td></tr><tr><td>++/-</td><td>++/-</td><td>?</td><td>H</td><td>D</td><td>Y</td></tr></table>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.</td></tr>
<tr><td>5</td><td>Flood risk</td><td><table><tr><td>Short</td><td>Med</td><td>Long</td><td>Prob</td><td>Dir/Ind</td><td>Rev?</td></tr><tr><td>0</td><td>0</td><td>0</td><td></td><td></td><td></td></tr></table></td></tr>
</table>

<table>
<tr><td></td><td></td><td>No effect on flood risk from change to the policy</td></tr>
<tr><td rowspan="2">6</td><td rowspan="2">Land</td><td><table><tr><th>Short</th><th>Med</th><th>Long</th><th>Prob</th><th>Dir/Ind</th><th>Rev?</th></tr><tr><td>0</td><td>0</td><td>0</td><td></td><td></td><td></td></tr></table></td></tr>
<tr><td>No effect on land use from change to the policy</td></tr>
<tr><td rowspan="2">7</td><td rowspan="2">Landscape and the historic environment</td><td><table><tr><th>Short</th><th>Med</th><th>Long</th><th>Prob</th><th>Dir/Ind</th><th>Rev?</th></tr><tr><td>0</td><td>0</td><td>0</td><td></td><td></td><td></td></tr></table></td></tr>
<tr><td>No effect on landscape and the historic environment from change to the policy</td></tr>
<tr><td rowspan="2">8</td><td rowspan="2">Transport</td><td><table><tr><th>Short</th><th>Med</th><th>Long</th><th>Prob</th><th>Dir/Ind</th><th>Rev?</th></tr><tr><td>0</td><td>0</td><td>0</td><td></td><td></td><td></td></tr></table></td></tr>
<tr><td>No effect on transport from change to the policy</td></tr>
<tr><td rowspan="2">9</td><td rowspan="2">Water</td><td><table><tr><th>Short</th><th>Med</th><th>Long</th><th>Prob</th><th>Dir/Ind</th><th>Rev?</th></tr><tr><td>0</td><td>0</td><td>0</td><td></td><td></td><td></td></tr></table></td></tr>
<tr><td>No effect on water quality and sustainable water resource management from change to the policy</td></tr>
</table>

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

<table>
<tr><td></td><td>Sustainability Objective</td><td>Comments</td></tr>
<tr><td>1</td><td>Biodiversity</td><td>
<table>
<tr><td>Short</td><td>Med</td><td>Long</td><td>Prob</td><td>Dir/Ind</td><td>Rev?</td></tr>
<tr><td>0</td><td>0</td><td>0</td><td></td><td></td><td></td></tr>
</table>
No effect on biodiversity from change to the policy
</td></tr>
<tr><td>2</td><td>Climate change</td><td>
<table>
<tr><td>Short</td><td>Med</td><td>Long</td><td>Prob</td><td>Dir/Ind</td><td>Rev?</td></tr>
<tr><td>0</td><td>0</td><td>0</td><td></td><td></td><td></td></tr>
</table>
No effect on climate change from change to the policy
</td></tr>
<tr><td>3</td><td>Community and well-being</td><td>
<table>
<tr><td>Short</td><td>Med</td><td>Long</td><td>Prob</td><td>Dir/Ind</td><td>Rev?</td></tr>
<tr><td>++</td><td>++</td><td>?</td><td>H</td><td>D</td><td>Y</td></tr>
</table>
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.
</td></tr>
<tr><td>4</td><td>Sustainable economic growth</td><td>
<table>
<tr><td>Short</td><td>Med</td><td>Long</td><td>Prob</td><td>Dir/Ind</td><td>Rev?</td></tr>
<tr><td>++/-</td><td>++/-</td><td>?</td><td>H</td><td>D</td><td>Y</td></tr>
</table>
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.
</td></tr>
<tr><td></td><td></td><td>
<table>
<tr><td>Short</td><td>Med</td><td>Long</td><td>Prob</td><td>Dir/Ind</td><td>Rev?</td></tr>
</table>
</td></tr>
</table>

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.

<table>
<tr><td></td><td>Sustainability Objective</td><td>Comments</td></tr>
<tr><td rowspan="2">1</td><td rowspan="2">Biodiversity</td><td><table><tr><td>Short</td><td>Med</td><td>Long</td><td>Prob</td><td>Dir/Ind</td><td>Rev?</td></tr><tr><td>?</td><td>?</td><td>?</td><td>L</td><td>D</td><td>N</td></tr></table></td></tr>
<tr><td>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.</td></tr>
<tr><td rowspan="2">2</td><td rowspan="2">Climate change</td><td><table><tr><td>Short</td><td>Med</td><td>Long</td><td>Prob</td><td>Dir/Ind</td><td>Rev?</td></tr><tr><td>?</td><td>?</td><td>?</td><td>L</td><td>I</td><td>N</td></tr></table></td></tr>
<tr><td>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</td></tr>
</table>

<table>
<tr><td></td><td></td><td>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.</td></tr>
<tr><td rowspan="2">3</td><td rowspan="2">Community and well-being</td><td><table><tr><th>Short</th><th>Med</th><th>Long</th><th>Prob</th><th>Dir/Ind</th><th>Rev?</th></tr><tr><td>?</td><td>?</td><td>?</td><td>L</td><td>D</td><td>N</td></tr></table></td></tr>
<tr><td>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.</td></tr>
<tr><td rowspan="2">4</td><td rowspan="2">Sustainable economic growth</td><td><table><tr><th>Short</th><th>Med</th><th>Long</th><th>Prob</th><th>Dir/Ind</th><th>Rev?</th></tr><tr><td>?</td><td>?</td><td>?</td><td>L</td><td>D</td><td>N</td></tr></table></td></tr>
<tr><td>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.</td></tr>
<tr><td rowspan="2">5</td><td rowspan="2">Flood risk</td><td><table><tr><th>Short</th><th>Med</th><th>Long</th><th>Prob</th><th>Dir/Ind</th><th>Rev?</th></tr><tr><td>?</td><td>?</td><td>?</td><td>L</td><td>D</td><td>N</td></tr></table></td></tr>
<tr><td>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.</td></tr>
<tr><td></td><td></td><td><table><tr><th>Short</th><th>Med</th><th>Long</th><th>Prob</th><th>Dir/Ind</th><th>Rev?</th></tr></table></td></tr>
</table>

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?	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.
		?	?	?	L	D	N	
8	Transport	Short	Med	Long	Prob	Dir/Ind	Rev?	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.
		?	?	?	L	D	N	
9	Water	Short	Med	Long	Prob	Dir/Ind	Rev?	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.
		?	?	?	L	D	N	

Option B1: Retain existing waste hierarchy targets.

<table>
<tr><td></td><td>Sustainability Objective</td><td>Comments</td></tr>
<tr><td>1</td><td>Biodiversity</td><td>
<table>
<tr><th>Short</th><th>Med</th><th>Long</th><th>Prob</th><th>Dir/Ind</th><th>Rev?</th></tr>
<tr><td>?</td><td>?</td><td>?</td><td>L</td><td>I</td><td>N</td></tr>
</table>
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.
</td></tr>
<tr><td>2</td><td>Climate change</td><td>
<table>
<tr><th>Short</th><th>Med</th><th>Long</th><th>Prob</th><th>Dir/Ind</th><th>Rev?</th></tr>
<tr><td>?</td><td>?</td><td>?</td><td>L</td><td>D</td><td>N</td></tr>
</table>
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.
</td></tr>
<tr><td>3</td><td>Community and well-being</td><td>
<table>
<tr><th>Short</th><th>Med</th><th>Long</th><th>Prob</th><th>Dir/Ind</th><th>Rev?</th></tr>
<tr><td>0</td><td>0</td><td>0</td><td></td><td></td><td></td></tr>
</table>
Retaining the waste hierarchy targets from the adopted KMWLP is unlikely to affect communities and wellbeing.
</td></tr>
<tr><td>4</td><td>Sustainable economic growth</td><td>
<table>
<tr><th>Short</th><th>Med</th><th>Long</th><th>Prob</th><th>Dir/Ind</th><th>Rev?</th></tr>
<tr><td>?</td><td>?</td><td>?</td><td>M</td><td>D</td><td>Y</td></tr>
</table>
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.
</td></tr>
</table>

5	Flood risk	<table><tr><th>Short</th><th>Med</th><th>Long</th><th>Prob</th><th>Dir/Ind</th><th>Rev?</th></tr><tr><td>0</td><td>0</td><td>0</td><td></td><td></td><td></td></tr></table> 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	<table><tr><th>Short</th><th>Med</th><th>Long</th><th>Prob</th><th>Dir/Ind</th><th>Rev?</th></tr><tr><td>0</td><td>0</td><td>0</td><td></td><td></td><td></td></tr></table> Waste hierarchy targets will have no significant effect on the efficient use of land or sensitive locations.
7	Landscape and the historic environment	<table><tr><th>Short</th><th>Med</th><th>Long</th><th>Prob</th><th>Dir/Ind</th><th>Rev?</th></tr><tr><td>0</td><td>0</td><td>0</td><td></td><td></td><td></td></tr></table> Waste hierarchy targets will have no significant effect on landscape and historic assets.
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9	Water	<table><tr><th>Short</th><th>Med</th><th>Long</th><th>Prob</th><th>Dir/Ind</th><th>Rev?</th></tr><tr><td>?</td><td>?</td><td>?</td><td>L</td><td>I</td><td>N</td></tr></table> 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 B2: Retain targets for recycling and reduce targets for landfill.

<table>
<tr><td></td><td>Sustainability Objective</td><td>Comments</td></tr>
<tr><td>1</td><td>Biodiversity</td><td>
<table>
<tr><td>Short</td><td>Med</td><td>Long</td><td>Prob</td><td>Dir/Ind</td><td>Rev?</td></tr>
<tr><td>+</td><td>+</td><td>?</td><td>L</td><td>I</td><td>N</td></tr>
</table>
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.
</td></tr>
<tr><td>2</td><td>Climate change</td><td>
<table>
<tr><td>Short</td><td>Med</td><td>Long</td><td>Prob</td><td>Dir/Ind</td><td>Rev?</td></tr>
<tr><td>+</td><td>+</td><td>?</td><td>M</td><td>I</td><td>N</td></tr>
</table>
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.
</td></tr>
<tr><td>3</td><td>Community and well-being</td><td>
<table>
<tr><td>Short</td><td>Med</td><td>Long</td><td>Prob</td><td>Dir/Ind</td><td>Rev?</td></tr>
<tr><td>+</td><td>+</td><td>?</td><td>M</td><td>D</td><td>Y</td></tr>
</table>
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.
</td></tr>
<tr><td>4</td><td></td><td>
<table>
<tr><td>Short</td><td>Med</td><td>Long</td><td>Prob</td><td>Dir/Ind</td><td>Rev?</td></tr>
<tr><td>++</td><td>++</td><td>?</td><td>H</td><td>D</td><td>Y</td></tr>
</table>
</td></tr>
</table>

<table>
<tr><td></td><td>Sustainable economic growth</td><td>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.</td></tr>
<tr><td>5</td><td>Flood risk</td><td><table><tr><th>Short</th><th>Med</th><th>Long</th><th>Prob</th><th>Dir/Ind</th><th>Rev?</th></tr><tr><td>+</td><td>+</td><td>+</td><td>L</td><td>I</td><td>N</td></tr></table>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.</td></tr>
<tr><td>6</td><td>Land</td><td><table><tr><th>Short</th><th>Med</th><th>Long</th><th>Prob</th><th>Dir/Ind</th><th>Rev?</th></tr><tr><td>0</td><td>0</td><td>0</td><td></td><td></td><td></td></tr></table>Waste hierarchy targets will have no significant effect on the efficient use of land or sensitive locations.</td></tr>
<tr><td>7</td><td>Landscape and the historic environment</td><td><table><tr><th>Short</th><th>Med</th><th>Long</th><th>Prob</th><th>Dir/Ind</th><th>Rev?</th></tr><tr><td>0</td><td>0</td><td>0</td><td></td><td></td><td></td></tr></table>Waste hierarchy targets will have no significant effect on landscape and historic assets.</td></tr>
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</table>

<table>
<tr><td rowspan="2">9</td><td rowspan="2">Water</td><td>
<table>
<tr><td>Short</td><td>Med</td><td>Long</td><td>Prob</td><td>Dir/Ind</td><td>Rev?</td></tr>
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<tr><td>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.</td></tr>
</table>

Option C: Do not change safeguarding policies DM7 and DM8

<table>
<tr><td></td><td>Sustainability Objective</td><td>Comments</td></tr>
<tr><td>1</td><td>Biodiversity</td><td>
<table>
<tr><td>Short</td><td>Med</td><td>Long</td><td>Prob</td><td>Dir/Ind</td><td>Rev?</td></tr>
<tr><td>0</td><td>0</td><td>0</td><td></td><td></td><td></td></tr>
</table>
Retaining the safeguarding approach in policies DM 7 and DM 8 is unlikely to affect biodiversity.
</td></tr>
<tr><td>2</td><td>Climate change</td><td>
<table>
<tr><td>Short</td><td>Med</td><td>Long</td><td>Prob</td><td>Dir/Ind</td><td>Rev?</td></tr>
<tr><td>-</td><td>-</td><td>-</td><td>M</td><td>D</td><td>N</td></tr>
</table>
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.
</td></tr>
<tr><td>3</td><td>Community and well-being</td><td>
<table>
<tr><td>Short</td><td>Med</td><td>Long</td><td>Prob</td><td>Dir/Ind</td><td>Rev?</td></tr>
<tr><td>-</td><td>-</td><td>-</td><td>M</td><td>D</td><td>N</td></tr>
</table>
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.
</td></tr>
<tr><td>4</td><td></td><td>
<table>
<tr><td>Short</td><td>Med</td><td>Long</td><td>Prob</td><td>Dir/Ind</td><td>Rev?</td></tr>
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<table>
<tr><td></td><td>Sustainable economic growth</td><td>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.</td></tr>
<tr><td>5</td><td>Flood risk</td><td><table><tr><th>Short</th><th>Med</th><th>Long</th><th>Prob</th><th>Dir/Ind</th><th>Rev?</th></tr><tr><td>-</td><td>-</td><td>-</td><td>L</td><td>I</td><td>N</td></tr></table>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.</td></tr>
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<tr><td>7</td><td>Landscape and the historic environment</td><td><table><tr><th>Short</th><th>Med</th><th>Long</th><th>Prob</th><th>Dir/Ind</th><th>Rev?</th></tr><tr><td>0</td><td>0</td><td>0</td><td></td><td></td><td></td></tr></table>No effect on landscape and the historic environment from the safeguarding policy approach.</td></tr>
<tr><td>8</td><td>Transport</td><td><table><tr><th>Short</th><th>Med</th><th>Long</th><th>Prob</th><th>Dir/Ind</th><th>Rev?</th></tr><tr><td>-</td><td>-</td><td>-</td><td>H</td><td>D</td><td>N</td></tr></table>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.</td></tr>
</table>

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<tr><td rowspan="2">9</td><td rowspan="2">Water</td><td><table><tr><th>Short</th><th>Med</th><th>Long</th><th>Prob</th><th>Dir/Ind</th><th>Rev?</th></tr><tr><td>0</td><td>0</td><td>0</td><td></td><td></td><td></td></tr></table></td></tr>
<tr><td>No effect on water quality and sustainable water resource management from the approach to safeguarding policy.</td></tr>
</table>

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-recyclablef raction 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 Effects[11]

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 Effects[12]

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 oresource 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 keys 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 transhipment 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.