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Executive Summary

Amey is commissioned to undertake Sustainability Appraisal (SA) in support of the Kent Minerals and Waste Local Plan (KMWLP) Minerals Sites Plan (MSP) preparation process. This report presents a non-technical summary of the final outcome of this process up to Main Modifications stage. The full findings of the SA are set out in a separate SA Report, the purpose of which is to provide information to the Kent County Council Environment and Transport Committee about the sustainability of the MSP as proposed and its likely impacts when adopted.

The Kent Minerals and Waste Local Plan (KMWLP) was adopted in July 2016 and sets out the vision and objectives for Kent's minerals supply and waste management capacity from 2013 to 2030. It identified that the specific sites for minerals developments would be set out in the separate MSP which is the subject of this SA Report. The MSP is a land use plan produced by Kent County Council which identifies and allocates mineral sites within the county for the working and winning of minerals. The main objective of the MSP is to ensure that Kent has enough permitted mineral reserves over the plan period (until 2030) and 7 years beyond to meet plan making requirements. The following sites are proposed for allocation in the MSP:

- M3 Chapel Farm (western part only)
- M10 Moat Farm
- M13 Stonecastle Farm Quarry Extension

Various environmental, social and economic issues have been identified through reviewing a wide variety of plans and strategies, collecting baseline information and identifying sustainability issues and problems. These issues have informed the development of the sustainability appraisal framework, which consists of a set of sustainable development policy objectives as set out in Table 1 of the report. The Main Modifications MSP has been appraised against this set of sustainability objectives.

Each of the sites contain or are adjacent to some form of biodiversity asset or biodiversity value and impacts are possible in each case. It will be important for planning applications to fully assess the impacts on biodiversity and to provide mitigation and a net gain in biodiversity. Restoration proposals at two of the sites aim to restore the site to biodiversity habitat which will help to mitigate any potential loss.

Some negative impacts are possible on community wellbeing, mainly due to the potential for negative impacts on residential amenity from operations and transport, and also on the diversion of footpaths. Developments are required to adequately minimise impacts from dust, noise, vibration, light and visual impacts and cumulative impacts are not likely to be significant.

Minerals sites generate vehicle movements accessing and leaving the sites. The scale of the cumulative impact of the MSP overall is not expected to be great given the predicted number of movements and the

context of all traffic movements in the county.

Each of the minerals sites have the potential for significant impacts on hydrology/hydrogeology and water quality. However, the cumulative impacts from all sites in the Minerals Sites Plan is not expected to be significant for the county as a whole.

Two of the minerals sites lie within Flood Zone 3. In these cases, it must be demonstrated that development can take place without adversely affecting flood risk and where possible contributing to a reduction in overall flood risk.

Two of the sites lie within the Metropolitan Green Belt, in which case it must be demonstrated that operations will not constitute inappropriate development or constitute very special circumstances. Given that sites will be restored to wetland habitat, lasting cumulative impacts on the Green Belt are not envisaged.

There is the potential for the sites to have limited impacts on landscape and on the historic environment. However, it will be possible to provide mitigation such that the significance of impacts is minimised. Adverse impacts on the AONBs are not likely to be significant.

The Minerals Sites Plan will help to contribute to economic growth by providing a supply of minerals to support construction and potentially other economic sectors that depend on aggregates. By facilitating the extraction of primary aggregates, the Minerals Sites Plan is exploiting a non-renewable resource, which cannot be considered sustainable.

The Minerals Sites Plan is likely to increase emissions of greenhouse gases overall by generating additional HGV movements and increasing the energy requirements for mineral processing on site. However, these are not significant when considered in the context of emissions from the county as a whole.

Recommendations are made in the report for measures to prevent, reduce and offset the likely significant adverse effects of the sites proposed for allocation in the MSP. These recommendations are for measures that must be addressed in detailed proposals submitted at planning application stage.

In November 2017, Kent County Council identified a longer list of 9 site allocation options following a consultation and gathering of more detailed information on the potential sites. These site options have been appraised as 'reasonable alternatives' for the MSP.

In addition to site alternatives, it was considered that there was potential to consider an alternative to allocating some sites for land-won aggregates in Kent. This alternative is to increase the supply of secondary and recycled aggregates, marine dredged aggregates and land-won aggregates from outside of Kent. This alternative has also been appraised and the results of this are set out in this report.



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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) Minerals Sites Plan (MSP) preparation process. 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. This report presents the final outcomes of this process up to Main Modifications stage. The purpose of the report is to provide information to the Kent County Council Environment and Transport Committee about the sustainability of the MSP as proposed and its likely impacts when adopted.

1.2. What is the plan seeking to achieve?

The MSP is a land use plan produced by Kent County Council which identifies and allocates mineral sites within the county for the working and winning of minerals. From 11 'Reasonable Alternatives', the following sites are proposed for allocation:

- M3 Chapel Farm
- M10 Moat Farm
- M13 Stonecastle Farm Quarry Extension

The main objective of the MSP is to ensure that Kent has enough permitted mineral reserves over the plan period (until 2030) and 7 years beyond to meet plan making requirements. Site M3 is a soft sand site and M10 and M13 are sharp sand and gravel sites.

The Kent Minerals and Waste Local Plan (KMWLP) was adopted in July 2016 and sets out the vision and objectives for Kent's minerals supply and waste management capacity from 2013 to 2030. The KMWLP did not allocate specific sites suitable for minerals and waste development except for two strategic sites - one for cement production (and related mineral reserves) at Holborough in the Medway Valley and one for hazardous waste disposal at Norwood Quarry on the Isle of Sheppey). The KMWLP identified that the specific sites for minerals developments would be set out in the separate MSP which is the subject of this SA Report. The selection of sites will be based on the policies of the KMWLP and sites proposed for development will be required to comply with the policies of the KMWLP.

In parallel with the development of the MSP, Kent County Council is also undertaking a Partial Review of the KMWLP. Policies CSW7, CSW8, CSW 12 and CSW 14 of the KMWLP state that a Waste Sites Plan will be prepared that will identify sites suitable for accommodating facilities needed to address the identified capacity shortfalls. A review of the future needs for waste management facilities in Kent has recently been undertaken and this has concluded that there is now no need for the development of this additional

capacity. The policies will be amended by the Partial Review to reflect this updated understanding. Policies DM7 and DM8 set out criteria to allow development that may affect safeguarded sites to proceed in certain prescribed circumstances. Policies DM 7 and DM 8 will be amended by the Partial Review to ensure that the safeguarding is not unduly rigid in its application. Policy CSM 2 will also be amended by the Partial Review to remove the requirement for the MSP to identify and allocate sites for the extraction of brickearth and chalk as existing permitted reserves of these minerals are sufficient to meet demand. The Partial Review has been subject to SA and the results of this are set out in a separate SA Report.

1.3. What's the situation now and how would it change without the plan (sustainability 'baseline')?

The following is a summary of the sustainability baseline characteristics in Kent.

Environmental baseline

- Kent is considered to be one 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 builtdevelopment 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 [KMAOM, 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 change without the Minerals Sites Plan?

There is a degree of uncertainty about how the baseline might change without the adoption of the MSP. Mineral sites will still come forward for development and these will be required to comply with the development management policies of the KMWLP. This includes policies on the protection and enhancement of: biodiversity value, landscape, Green Belt, heritage assets, the water environment, health and amenity (including air quality) and transportation. Long term trends in environmental quality are likely to continue.

However, without the MSP there will be less certainty that Kent would be able to provide enough minerals to support the expected future demand for minerals from construction and industry. In such an event, there would be a need to source minerals from elsewhere. This may mean importing minerals from other parts of the country, which will have adverse effects on transport networks and air quality. Alternatively, increased quantities may need to be secured from secondary and recycled aggregates and/or marine dredged aggregates. If sufficient minerals of the right type cannot be found, construction and industrial growth may be checked. This could lead to insufficient homes being provided with adverse effects on people and communities. Minerals in Kent would not provide sufficient material to support economic growth, in which case employment levels could reduce and GDP and household incomes may fall.

Emissions of carbon dioxide may be unchanged without the MSP. Mineral sites will still be developed and emissions of carbon dioxide from mineral operations will continue largely the same as at current levels. However, if imports from other parts of the country are required, this will lead to increased carbon dioxide emissions associated with mineral transport and associated risks to people and communities.

The social baseline is unlikely to be affected without the adoption of the MSP. Population, levels of deprivation and health are unlikely to be significantly different with or without the MSP. Mineral sites will still come forward for development and these must comply with the policies of the KMWLP, including on health and amenity.

1.4. Characteristics of areas likely to be significantly affected

The SEA Directive requires that the appraisal describes the characteristics of areas likely to be significantly affected by the MSP. In deciding which areas are likely to be significantly affected by the MSP, the SA has made reference to the spatial distribution of the proposed minerals sites to determine whether there are any areas of Kent which contain a particular concentration of minerals sites that could give rise to significant effects. This was not found to be the case.

1.5. Areas of Particular Environmental Importance

There are five European sites designated under European Directives 79/409/EEC and 92/43/EEC and which are located within a 20km radius of the 8 sites which have been considered as 'reasonable alternatives' for the MSP. These are:

- Dungeness SAC;
- Dungeness, Romney Marsh & Rye Bay SPA & Ramsar site;
- Ashdown Forest SAC and SPA;
- North Downs Woodlands SAC and
- Peter's Pit SAC.

The characteristics of these designated sites are described in detail in Section 3.6 of the main report.

1.6. SA Framework and Sustainability Objectives

Various environmental, social and economic issues have been identified through reviewing a wide variety of plans and strategies, collecting baseline information and identifying sustainability issues and problems. These issues have informed the development of the sustainability appraisal framework, which consists of a set of sustainable development policy objectives (sustainability objectives) as set out in Table 1. Following due diligence in terms of the context and baseline conditions, the Framework and Sustainability Objectives for the SA of the MSP has been developed using that produced by URS (2013). The relationship between the 2010 Scoping and 2013 SA Report objectives is presented in Table 1 below, which also expands on the detail

of the objectives and the additions made following the 2017 Scoping exercise and review of the recent key policy developments at national level¹.

Susta	ainability Objectives	Corresponding SO	Detail – including additions resulting from MPS SA Scoping (Amey,
		(Scott Wilson, 2010)	2017) and additions resulting from review of recent key policy developments
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	S05	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 groups within communities. - Ensure that the necessary aggregates are available for building, and that the necessary waste infrastructure is in place to support housing growth - Ensure that minerals development does not contribute to poor air quality particular reference to PM2.5 and NOx - Protect and enhance public rights of way and access - Protect local green space
4	Sustainable economic growth	S011	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

¹ NPPF 2019; 25 Year Environment Plan; Clean Air Strategy; Our Waste, Our Resources: A Strategy for England; Amendment to Climate Change Act

			– 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	SO3	Protect and enhance Kent's countryside and historic environment				
	the historic		- Protect the integrity of the AONBs and other particularly valued or				
	environment		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	SO10 [waste]	
(2013)		
	.L	<u> </u>

Table 1 SA Framework

1.7. Likely Significant Effects of the Main Modifications MSP

The sites that are proposed for allocation are M3 Chapel Farm (western part only), M10 Moat Farm and M13 Stonecastle Farm Quarry Extension. The following table summarises the conclusions about the impact of the MSP overall with these three sites proposed for allocation.

	Sustainability Objective								
Site	1 Biodiversity	2 Climate change	3 Community and wellbeing	4 Sustainable economic growth	5 Flood risk	6 Land	7 Landscape and the historic environment	8 Transport	9 Water
M3 Chapel Farm	+	-	-/?	++/-	0	-	-/0	?	0
M10 Moat Farm	+	0	0/-	++/-	?	?	-/0	0/?	-
M13 Stonecastle Farm Quarry	+	0	0	++/-	?	0/?	?	0/?	0
Overall impacts	+	-	-/?	++/-	?	?	-/?	?	0

Table 2: Summary of Findings of SA of MSP Overall

Each of the sites contain or are adjacent to some form of biodiversity asset or biodiversity value and impacts are possible in each case. Planning applications are required to fully assess the impacts on biodiversity, to provide mitigation to ensure no unacceptable adverse impacts and to provide a net gain in biodiversity. Restoration proposals at two of the sites aim to restore the site to biodiversity habitat which will help to mitigate any potential loss.

The Minerals Sites Plan is likely to increase emissions of greenhouse gases overall by generating additional HGV movements and increasing the energy requirements for mineral processing on site. However, these are insignificant when considered in the context of emissions from the county as a whole.

Some negative impacts are possible on community wellbeing, mainly due to the potential for negative impacts on residential amenity from operations and transport, and also on the diversion of footpaths. However, development management criteria require mitigation to adequately minimise impacts from dust, noise, vibration, light and visual impacts and cumulative impacts are not likely to be significant.

The Minerals Sites Plan will help to contribute to economic growth by providing a supply of minerals to support construction and potentially other economic sectors that depend on aggregates. By facilitating the

extraction of primary aggregates, the Minerals Sites Plan is exploiting a non-renewable resource, which cannot be considered sustainable.

Two of the minerals sites lie within Flood Zone 3. In these cases, it must be demonstrated that development can take place without adversely affecting flood risk and where possible contributing to a reduction in overall flood risk.

One of the minerals sites contains soil which is classed as the best and most versatile agricultural land, although restoration to agricultural land is proposed and therefore the impact of the MSP on soil quality is not likely to be significant. Two of the sites lie within the Metropolitan Green Belt, in which case it must be demonstrated that operations will not constitute inappropriate development or constitute very special circumstances. Given that sites will be restored to wetland habitat, lasting cumulative impacts on the Green Belt are not envisaged.

There is the potential for the sites to have limited impacts on landscape and on the historic environment. However, it will be possible to provide mitigation such that the significance of impacts is minimised. Adverse impacts on the AONBs are not likely to be significant.

Minerals sites generate vehicle movements accessing and leaving the sites. The majority of these are HGV movements and it is estimated that these will range between 4 movements per hour to 8 movements per hour depending on the site. In addition, staff vehicles will access the sites, around an estimated 10 movements per day. For sites M10 and M13, operations are planned to run sequentially with existing extraction in the locality so that the impacts from vehicles are likely to be no greater than existing impacts. The scale of the cumulative impact of the MSP overall is not expected to be great given the predicted number of movements and the context of all traffic movements in the county. It is unlikely that the Minerals Sites Plan will support the use of sustainable modes of transport for minerals, although the KMWLP safeguards railheads and wharves to support rail and water transport of minerals.

Each of the minerals sites have the potential for significant impacts on hydrology/hydrogeology and water quality. Restoration to wetland could affect local hydrology. However, development management criteria for the sites require assessment and mitigation of impacts and the cumulative impacts from all sites in the Minerals Sites Plan is not expected to be significant for the county as a whole.

1.8. Recommendations for Mitigating Adverse Effects

Recommendations are made in the detailed appraisal of sites in Appendix D for measures to prevent, reduce and offset the likely significant adverse effects of the sites proposed for allocation in the MSP. These recommendations are for measures that must be addressed in detailed proposals submitted at planning application stage. These measures address impacts on:

- Biodiversity habitats and species
- Amenity, including on public access, noise, dust, vibration, visual impacts and light

- Air quality
- Flood risk
- Green Belt
- Landscape
- Designated and undesignated heritage assets
- Road network
- Water quality and hydrology

1.9. Reasons for Selecting Alternatives Dealt With

A Refresh Call for Sites took place from December 2016 to March 2017, resulting in 38 sites being submitted to KCC for selection assessment, accompanied by a wide range of detailed technical and operational impact data from applicants. For a site to be considered to be a Mineral Site Option it had to:

- Align with the objectives of the adopted KMWLP and scope of the Sites Plan: The KWMLP sets out the minerals supply needs and waste management capacity provision over the period 2013-2030 and the Sites Plan needs to identify sufficient sites to contribute to this requirement.
- Be justified: The site should represent an appropriate option based on a desktop assessment of the opportunities and constraints associated with its location.
- Be deliverable: Development of the site should not result in severe adverse effects that would affect
 its deliverability, and its development should also be supported by the landowner

A number of sites were ruled out of consideration as reasonable alternatives and therefore were not subject to KCC's Regulation 18 'Minerals Sites Plan Options Consultation'.

Kent County Council published a short list of options² for minerals sites being considered as allocations in the MSP. These sites were subject to an initial screening as stage 2 of the KCC Site Selection Methodology, known as the 'RAG' assessment. The following sites were published as options for consultation with a summary of the results of the Stage 2 RAG assessment:

- site M2 Lydd Quarry Extensions
- site M3 Chapel Farm
- site M7 Central Road
- site M8 West Malling Sandpit
- site M9 The Postern

² Mineral Sites Plan Options Consultation, Kent County Council, September 2017

- site M10 Moat Farm
- site M11 Joyce Green Quarry
- site M12 Postern Meadows
- site M13 Stonecastle Farm Quarry Extension

In November 2017, Kent County Council identified site allocation options following a review of the information obtained through the above consultation on options and gathering of more detailed information on the sites. M9 was no longer being progressed because it was withdrawn by the promoter. Therefore, the following options remained as 'reasonable alternatives' to be considered for site allocations:

- site M2 Lydd Quarry Extensions
- site M3 Chapel Farm
- site M7 Central Road
- site M8 West Malling Sandpit
- site M10 Moat Farm
- site M11 Joyce Green Quarry
- site M12 Postern Meadows
- site M13 Stonecastle Farm Quarry Extension

These reasonable alternatives have been subject to SA in this report.

Following detailed technical assessment, review of further submissions to Kent County Council in relation to the sites and the findings of this SA, several of the sites listed as reasonable alternatives were ruled out as proposed allocations Main Modifications draft MSP. Three sites are proposed for allocation in the Main Modifications draft MSP. These sites are judged to have acceptable or mitigable impacts following detailed technical assessment, consultation and review of the findings of the SA:

M3 Chapel Farm

The western part of the site is suitable for allocation in the Main Modifications draft MSP, subject to meeting development management criteria at planning application stage. The eastern part of the site has been withdrawn by the promoter due to likely unacceptable impact on heritage asset.

M10 Moat Farm

Suitable for allocation in Main Modifications draft MSP, subject to meeting development management criteria at planning application stage.

• M13 Stonecastle Farm Quarry Extension

Suitable for allocation in Main Modifications draft MSP, subject to meeting development management criteria at planning application stage.

In addition to site alternatives, it was considered that there was potential to consider an alternative to allocating some or any sites for land-won aggregates in Kent.

With its coastal location, Kent fulfils an important role in the importation of minerals including a range of construction aggregates from mainland Europe, as well as marine dredged aggregates (MDA) and imported recycled and secondary materials. Kent benefits from a number of aggregate wharves, into which significant quantities of MDA and crushed rock are landed. Land-won sharp sand and gravel is also imported by rail and road from areas beyond Kent. Assurances regarding the security of these minerals imports during the Plan period were obtained in developing the KMWLP.

In addition to the land-won maintenance of landbanks to support a steady future supply of aggregate in Kent, the KMWLP contains strategic objectives and policies to

- Promote and encourage the use of recycled and secondary aggregates in place of land-won minerals.
- Safeguard existing, planned and potential sites for mineral infrastructure including wharves and rail
 depots across Kent to enable the on-going transportation of marine dredged aggregates, crushed rock
 and other minerals as well as other production facilities.

It is therefore reasonable to assume that an increased supply of secondary and recycled aggregates and MDA is an alternative to the extraction of some land-won sharp sand and gravels. It is also reasonable to assume that some land-won aggregates could be imported into Kent from sites outside of Kent. This has therefore been appraised as an alternative to the allocation of sites for sharp sand and gravel. The results of this appraisal are set out in detail in Appendix E and summarised in Section 6.3.

1.10. Methodology

The SA has appraised each of the sites considered as reasonable alternatives, as well as the alternative to allocating some or any land-won aggregate sites in Kent against the appraisal framework set out in Table 1. The SA has also appraised the Kent site selection methodology against this framework. The appraisal was done by assessing each site, other alternatives and elements of methodology against the appraisal objectives in turn and making a largely qualitative assessment, with reference also to the baseline data from the Scoping Report.

In reporting the results of the appraisal, the following symbols have been used to indicate the broad nature of the predicted effect:

	Symbol
Significant positive effect	++
Some positive effect	+
No effect	0
Some adverse effect	
Significant adverse effect	
Uncertain effect	?

Further details on the methodology, including assumptions made, are given in Section 6 of the main report. Information on the difficulties encountered is provided in Section 4 of the main report. These relate to the lack of available data in some instances, and uncertainties about detailed matters of implementation.

1.11. Monitoring Recommendations

The sustainability appraisal has developed a set of recommendations for monitoring the predicted and unforeseen impacts of implementation of the Main Modifications draft MSP as proposed. These are set out as a series of indicators related to the sustainability appraisal framework based on the likely and possible impacts of the Main Modifications draft MSP. The recommended indicators should be incorporated into the Annual Monitoring Report for the Local Plan and are set out in Section 7.