



Sustainability Appraisal (SA) of the Kent Minerals and Waste Local Plan



SA Report

July 2014



REVISION SCHEDULE					
Rev	Date	Details	Prepared by	Reviewed by	Approved by
1	July 2014	SA Report published for consultation alongside the 'Submission' version of the Kent Minerals and Waste Local Plan	Mark Fessey Principal Consultant	Steve Smith Technical Director	Steve Smith Technical Director

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INTRODUCTION

1 BACKGROUND

- 1.1.1 URS is commissioned to undertake Sustainability Appraisal (SA) in support of the emerging Kent Minerals and Waste Local Plan (MWLP). 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. SA of Local Plans is legally required.¹

2 SA EXPLAINED

- 2.1.1 It is a 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.²
- 2.1.2 The Regulations require that a report - which for the purposes of SA is known as **the 'SA Report'** – is published for consultation alongside the draft plan and then taken into account, alongside consultation responses, when finalising the plan.
- 2.1.3 Essentially, the SA Report must *'identify, describe and evaluate'* the likely significant effects of implementing *'the plan, and reasonable alternatives'*. More specifically, the SA Report must essentially answer **four questions**:
1. What's the scope of the SA?
 2. What has Plan-making / SA involved up to this point?
 - Preparation of the draft plan must have been informed by at least one earlier plan-making / SA iteration. 'Reasonable alternatives' must have been appraised.
 3. What are the appraisal findings at this current stage?
 - i.e. in relation to the draft plan.
 4. What happens next?
- 2.1.4 These questions are derived from Schedule 2 of the Regulations, which present 'the information to be provided within the report. Table 1.1 'makes the links' between the Schedule 2 requirements and the four SA questions.

3 STRUCTURE OF THIS SA REPORT

- 3.1.1 This document is the SA Report for the Kent MWLP and hence needs to answer all four of the questions listed above with a view to providing the information required by the Regulations. **Each of the four questions is answered in turn.**

¹ Since provision was made through the Planning and Compulsory Purchase Act 2004 it has been understood that local planning authorities must carry out a process of Sustainability Appraisal alongside plan-making. The centrality of SA to Local Plan-making is emphasised in the National Planning Policy Framework (NPPF, 2012). The Local Planning Regulations (2012) require that an SA Report is published alongside the proposed submission version of the plan document (Regulation 19).

² Directive 2001/42/EC

Table 1.1: Four questions that must be answered within the SA Report

SA REPORT QUESTION		SCHEDULE II REQUIREMENT (THE REPORT MUST INCLUDE...)
What's the scope of the SA?	What's the plan seeking to achieve?	<ul style="list-style-type: none"> An outline of the contents, main objectives of the plan and relationship with other relevant plans and programmes
	What's the sustainability 'context'?	<ul style="list-style-type: none"> The relevant environmental protection objectives, established at international or national level Any existing environmental problems which are relevant to the plan including, in particular, those relating to any areas of a particular environmental importance
	What's the sustainability 'baseline'?	<ul style="list-style-type: none"> The relevant aspects of the current state of the environment and the likely evolution thereof without plan implementation The environmental characteristics of areas likely to be significantly affected Any existing environmental problems which are relevant to the plan including, in particular, those relating to any areas of a particular environmental importance
	What are the key issues & objectives that should be a focus of SA?	<ul style="list-style-type: none"> Key problems / issues and objectives that should be a focus of / provide a 'framework' for appraisal
What has plan-making / SA involved up to this point?		<ul style="list-style-type: none"> An outline of the reasons for selecting the alternatives dealt with (and thus an explanation of why the alternatives dealt with are 'reasonable') The likely significant effects on the environment associated with alternatives An outline of the reasons for selecting preferred options / a description of how environmental objectives and considerations are reflected in the draft plan
What are the appraisal findings at this current stage?		<ul style="list-style-type: none"> The likely significant effects on the environment associated with the draft plan The measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects of implementing the draft plan
What happens next?		<ul style="list-style-type: none"> A description of the monitoring measures envisaged

N.B. The right-hand column of Table 1.1 does not quote directly from Schedule II of the Regulations. Rather, it reflects a degree of interpretation. This interpretation is explained in **Appendix I** of this report.

PART 1: WHAT'S THE SCOPE OF THE SA?

4 INTRODUCTION (TO PART 1)

4.1.1 This is Part 1 of the SA Report, the aim of which is to introduce the reader to the scope of the SA. In particular, and as required by the Regulations³, this Part of the SA Report answers the series of questions below.

- What's the Plan seeking to achieve?
- What's the sustainability 'context'?
- What's the sustainability 'baseline'?
- What are the key issues and objectives that should be a focus of SA?

4.2 Consultation on the scope

4.2.1 The Regulations require that: '*When deciding on the scope and level of detail of the information that must be included in the report, the responsible authority shall consult the consultation bodies*'. In England, the consultation bodies are Natural England, The Environment Agency and English Heritage.⁴ As such, these authorities were consulted on the SA scope in 2009. This consultation was achieved by providing a 'Scoping Report' for their comment. The Scoping Report was subsequently finalised and is now available online @

http://www.kent.gov.uk/environment_and_planning/planning_in_kent/minerals_and_waste/evidence_base/sustainability_appraisal.aspx

³ Environmental Assessment of Plans and Programmes Regulations 2004

⁴ In-line with Article 6(3).of the SEA Directive, these consultation bodies were selected because '*by reason of their specific environmental responsibilities,[they] are likely to be concerned by the environmental effects of implementing plans and programme*'.

5 WHAT IS THE PLAN SEEKING TO ACHIEVE?

The SA Report must include...

- An outline of the contents, main objectives of the plan and relationship with other relevant plans and programmes

5.1 Overview

- 5.1.1 Kent County Council (KCC) is preparing a set of new Minerals and Waste Local Plans to replace the old style, existing Local Plans for the county council's administrative area. The key document is the 'Minerals and Waste Local Plan' (previously known as the 'Core Strategy'). Two Mineral and Waste Sites Plans will be produced separately. The MWLP is the overarching strategic document and the two sites plans will have to be in conformity with it.
- 5.1.2 Planning to the year 2030, the MWLP will consider strategic site provision for all minerals and waste management facilities; contain a number of development management policies for evaluating minerals and waste planning applications; and identify two areas where key (strategic) mineral and waste development should take place.

5.2 The planning context

- 5.2.1 The planning context to the MWLP is provided by:⁵
 - European Legislation
 - Waste Framework Directive (WFD) (2008/98/EC) – requires all member states to achieve recycling and composting rates of 50% by 2020 for household waste streams including paper, metal, plastic and glass and also for other waste streams which are similar to waste from households. In addition, by 2020, the preparation for re-use, recycling and other material recovery of non-hazardous construction and demolition waste has to be increased to a minimum of 70%;
 - Landfill Directive (1999/31/EC) - requires substantial reductions in the quantity of biodegradable waste that is landfilled, and encourages the diversion of nonrecyclable and non-usable waste to other methods of treatment;
 - The Water Framework Directive (Water FD) (2000/60/EC) – seeks to improve the local water environment for people and wildlife, and promote the sustainable use of water. The overall aim of the Water FD is for all water bodies to reach good status by 2027. The Water FD introduced the concept of integrated river basin management and such plans should influence development plans.
 - National Planning Policy and Guidance
 - The Government published the National Planning Policy Framework (NPPF) in March 2012. It includes policy on plan making and planning for minerals. Accompanying Technical Guidance was also published in March 2012. This includes guidance on flood risk and minerals policy. The NPPF does not contain specific policies on waste, since waste management planning policy is published within the national Waste Management Plan for England.
 - Marine Policy Statement (MPS)
 - The MPS also contains minerals policy, in relation to offshore mineral interests.
 - Other Local Plans and Strategies
 - Kent has a suite of minerals and waste 'saved' policies which are derived from old minerals and waste plans listed below. These will continue to have *some* weight until they are replaced by the policies in this Minerals and Waste Local Plan.

⁵ More information on the planning context is provided in the plan consultation document.

- As Waste Disposal Authority, the County Council prepared a Joint Municipal Waste Management Strategy (JMWMS) with the districts in Kent in 2007. The KWP plans and budgets for Kent's household waste so that new facilities can be built where and when they are needed. In 2011 a 'refresh' of the JMWMS began. An ambition is to get close to 0% for untreated household waste being sent to landfill.
- KCC has a statutory duty to prepare and update its Strategic Transport Plan. The most recent version of this document was adopted in 2011.
- The 12 districts within the County have all prepared or are preparing Local Plans.

5.3 Strategic Objectives of the Minerals and Waste Local Plan

- General
 - 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.
 - 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.
- Minerals
 - Ensure the delivery of adequate and steady supplies of chalk, brickearth, clay, silica sand, crushed rock, building stone, minerals for cement and sand and gravel 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.
 - Safeguarded sites for wharves / rail depots across the County to enable the ongoing importation of marine dredged aggregates, crushed rock and other minerals.
 - Enable the small scale, low intensity extraction of building stone minerals for heritage building products.
 - Restore minerals sites to the highest possible standard and incorporate opportunities for biodiversity to meet targets outlined in the Kent Biodiversity Action Plan, the Biodiversity Opportunity Areas and the Greater Thames Nature Improvement Area.
 - Encourage the sustainable use of the inert non-recyclable fraction of Construction, Demolition and Excavation Waste for quarry restoration.
- 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 landfills.
 - Promote the management of waste close to the source of production in a sustainable manner using appropriate technology and where applicable innovative technology.
 - Use waste as a resource to provide opportunities for the generation of renewable energy for use within Kent through energy from waste and other mechanisms such as gasification and aerobic/anaerobic digestion.
 - Provide locations for additional waste sites and facilitate expansion of existing sites, where appropriate to enable waste to be managed in a sustainable manner.

5.4 What's the plan not seeking to achieve?

- 5.4.1 It is important to emphasise that the plan will be strategic in nature. Even the allocation of sites should be considered a strategic undertaking, i.e. a process that omits consideration of some detailed issues in the knowledge that these can be addressed further down the line (through the planning application process). The strategic nature of the plan is reflected in the scope of the SA.

6 WHAT'S THE SUSTAINABILITY 'CONTEXT'?

The SA Report must include...

- The relevant environmental protection objectives, established at international or national level
- Any existing environmental problems which are relevant to the plan including, in particular, those relating to any areas of a particular environmental importance

6.1 Introduction

6.1.1 An important step when seeking to establish the appropriate 'scope' of an SA involves reviewing sustainability 'context' messages. From the SEA Directive it is understood that there is a need to focus on context messages relating to:

- Broad problems / issues; and
- Objectives
 - i.e. 'things that are aimed at or sought'.

6.1.2 Key messages from the context review are summarised below under 'topic' headings.

6.2 Biodiversity

6.2.1 The EU Sustainable Development Strategy⁶, adopted in 2006, included an objective to halt the loss of biodiversity by 2010. More recently at the European level, a new EU Biodiversity Strategy⁷ (May 2011) established a Europe-wide target to "*halt the loss of biodiversity and the degradation of ecosystem services in the EU by 2020*".

6.2.2 Key messages from the National Planning Policy Framework (NPPF)⁸ include -

- Contribute to the Government's commitment to halt the overall decline in biodiversity by minimising impacts and achieving net gains in biodiversity wherever possible.
- Promote the 'preservation, restoration and recreation of priority habitats, ecological networks' and the 'protection and recovery of priority species'. Plan for biodiversity at a landscape-scale across local authority boundaries.
- Set criteria based policies for the protection of internationally, nationally and locally designated sites, giving weight to their importance as a part of a wider ecological network.
- Take account of the effects of climate change in the long term. Adopt proactive strategies to adaptation and manage risks through adaptation measures including green infrastructure.
 - Green infrastructure is defined as being: 'a network of multi-functional green space, urban and rural, which is capable of delivering a wide range of environmental and quality of life benefits for local communities'. Positive planning for 'green infrastructure' is recognised as part of planning for 'ecological networks'. High quality open spaces should be protected or their loss mitigated, unless a lack of need is established.
- 'Once Green Belts have been defined, local planning authorities should plan positively to enhance the beneficial use of the Green Belt, notably to 'retain and enhance landscapes, visual amenity and biodiversity'.

⁶ Council of the European Union (2006) The EU Sustainable Development Strategy [online] available at:

<http://register.consilium.europa.eu/pdf/en/06/st10/st10117.en06.pdf> (accessed 07/2013)

⁷ European Commission (2011) Our life insurance, our natural capital: an EU biodiversity strategy to 2020 [online] available at: http://ec.europa.eu/environment/nature/biodiversity/comm2006/pdf/2020/1_EN_ACT_part1_v7%5b1%5d.pdf (accessed 07/2013)

⁸ DCLG (2012) National Planning Policy Framework [online] available at:

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/6077/2116950.pdf

6.2.3 There is a need to focus on the conservation of biodiversity over large areas of land (i.e. at the landscape scale) where habitat patches that are now fragmented would once have functioned more as an interconnected whole. There is a need to protect and maximise the value of areas already rich in wildlife; expand, buffer, and create connections and stepping stones between these areas; and make the wider landscape more permeable to wildlife.⁹

6.3 Climate change mitigation

6.3.1 Key messages from the National Planning Policy Framework⁸ (NPPF) include -

- Support the transition to a low carbon future in a changing climate as a 'core planning principle'.
- There is a key role for planning in securing radical reductions in GHG, including in terms of meeting the targets set out in the Climate Change Act 2008¹⁰. Planning policy should support the move to a low carbon future through measures including:
 - planning for new development in locations and ways which reduce GHG emissions
 - positively promoting renewable energy technologies and considering identifying suitable areas for their construction
 - encouraging those transport solutions that support reductions in greenhouse gas emissions and reduce congestion.

6.3.2 In terms of **climate change adaptation**, the NPPF is clear that planning authorities should take account of the long term effects of climate and 'adopt proactive strategies' to adaptation, with new developments planned to avoid increased vulnerability to climate change impacts.

6.3.3 In the guidance document "*How local authorities can reduce emissions and manage climate risk*"¹¹, planning functions are described as being a 'key lever in reducing emissions and adapting localities to a changing climate', with it considered particularly important that local authorities use these to:

- Enforce energy efficiency standards in new buildings and extensions;
- Reduce transport emissions by concentrating new developments in existing cities and large towns and/or ensuring they are well served by public transport; and
- Work with developers to make renewable energy projects acceptable to local communities.

6.3.4 With regards to low-carbon district heating networks, the DECC report "*The future of heating*"¹² points out that around half (46%) of the final energy consumed in the UK is used to provide heat, contributing roughly a third of the nation's greenhouse gas emissions. Renewable heat currently represents 1% of heat generation in the UK. The Government's vision is of: '*buildings benefiting from a combination of renewable heat in individual buildings, particularly heat pumps, and **heat networks distributing low carbon heat to whole communities...focusing first on the energy efficiency of our buildings...***' (our emphasis).

⁹The Wildlife Trusts (2010) A Living Landscape: play your part in nature's recovery [online] available at: <http://www.wildlifetrusts.org/aliveinglandscape> (accessed 07/2013)

¹⁰The Climate Change Act 2008 sets targets for greenhouse gas (GHG) emission reductions through action in the UK of at least 80% by 2050, and reductions in CO2 emissions of at least 26% by 2020, against a 1990 baseline.

¹¹Committee on Climate Change (2012) How local authorities can reduce emissions and manage climate risk [online] available at: http://hmccc.s3.amazonaws.com/Local%20Authorities/1584_CCC_LA%20Report_bookmarked_1b.pdf (accessed 11/2012)

¹²DECC (2012)The Future of Heating: A strategic framework for low carbon heat in the UK [online] available at: <http://www.decc.gov.uk/assets/decc/11/meeting-energy-demand/heat/4805-future-heating-strategic-framework.pdf> (accessed 11/2012)

6.4 Community and well-being

- 6.4.1 A 'core planning principle' of the National Planning Policy Framework⁸ (NPPF) is to 'take account of and support local strategies to improve health, social and cultural wellbeing for all' and support vibrant and healthy communities. The NPPF states that planning for transport and travel will have an important role in 'contributing to wider sustainability and health objectives'.
- 6.4.2 There is "overwhelming evidence that health and environmental inequalities are inexorably linked and that poor environments contribute significantly to poor health and health inequalities"¹³. To ensure that the built environment promotes health and reduces inequalities for all local populations there is a need to:
- fully integrate the planning, transport, housing, environmental and health systems to address the social determinants of health in each locality;
 - prioritise policies and interventions that both reduce health inequalities and mitigate climate change including by improving active travel and delivering good quality open and green spaces; and
 - support locally developed and evidence-based community regeneration programmes that remove barriers to community participation and action; and reduce social isolation.
- 6.4.3 In terms of **air quality**, the EU Thematic Strategy on Air Pollution¹⁴ aims to cut the annual number of premature deaths from air pollution-related diseases by almost 40% by 2020 (using 2000 as the base year), as well as substantially reducing the area of forests and other ecosystems suffering damage from airborne pollutants. The National Planning Policy Framework (NPPF)⁸ identifies that there is a need to: prevent "both new and existing development from contributing to or being put at unacceptable risk from, or being adversely affected by unacceptable levels of soil, air, water or noise pollution or land instability". The NPPF identifies that "Planning policies should sustain compliance with and contribute towards EU limit values or national objectives for pollutants, taking into account the presence of Air Quality Management Areas and the cumulative impacts on air quality from individual sites in local areas". The Air Quality Strategy for England, Scotland, Wales and Northern Ireland¹⁵ sets health-based objectives for nine main air pollutants¹⁶. Performance against these objectives is monitored where people are regularly present and might be exposed to air pollution. The recent Defra report Action for air quality in a changing climate¹⁷ focuses on the synergies between the two issues of air quality and climate change. In particular, it notes the potential for additional health benefits through the closer integration of climate and air pollution policy. It is suggested that co-benefits can be realised through a variety of means, including promoting low-carbon vehicles and renewable energy.

6.5 Sustainable economic growth

- 6.5.1 Key messages from the National Planning Policy Framework⁸ (NPPF) include -
- The planning system can make a contribution to building a strong, responsive economy by 'ensuring that sufficient land of the right type is available in the right places and at the right time to support growth and innovation; and by identifying and coordinating development requirements, including the provision of infrastructure'.

¹³ The Marmot Review (2011) The Marmot Review: Implications for Spatial Planning [online] available at: <http://www.nice.org.uk/nicemedia/live/12111/53895/53895.pdf> accessed 08/2012)

¹⁴ Commission of the European Communities (2005) Thematic Strategy on air pollution [online] available at: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2005:0446:FIN:EN:PDF> (accessed 07/2013)

¹⁵ Defra (2007) Air Quality Strategy for England, Scotland, Wales and Northern Ireland [online] available at: <http://www.defra.gov.uk/environment/quality/air/air-quality/approach/> (accessed 07/2013)

¹⁶ Benzene; 1,3-butadiene; carbon monoxide (CO); lead; nitrogen dioxide (NO₂); ozone; particles (PM₁₀); sulphur dioxide (SO₂); and polycyclic aromatic hydrocarbons.

¹⁷ Defra (2010) Air Pollution: Action in a Changing Climate [online] available at: <http://www.defra.gov.uk/publications/files/pb13378-air-pollution.pdf> (accessed 07/2013)

- There is a need to capitalise on ‘inherent strengths’, and to meet the ‘twin challenges of global competition and of a low carbon future’.
- There is a need to support new and emerging business sectors, including positively planning for ‘clusters or networks of knowledge driven, creative or high technology industries’.
- Local Plans should support the sustainable growth and expansion of all types of business and enterprise in rural areas and promote the development and diversification of agricultural and other land-based rural businesses.

6.5.2 Specific examples of areas where it makes sense for Government intervention to tackle market failures include: investment in infrastructure; tackling barriers such as transport congestion and poor connections; other support to areas facing long term growth challenges where this can help them manage their transition to growth industries; and strategic intervention where it can stimulate private sector investment in new green technology in strategic locations.¹⁸

6.5.3 Local plans should support the sustainable growth and expansion of all types of business and enterprise in rural areas and promote the development and diversification of agricultural and other land-based rural businesses. The improvement of transport links and the provision of adequate digital infrastructure can facilitate the ‘significant untapped potential’ of rural areas to contribute to economic growth and employment.¹⁹

6.5.4 Kent is a member of The South East Local Enterprise Partnership (SE LEP) which encompasses East Sussex, Essex, Kent, Medway, Southend and Thurrock. LEPs are voluntary partnerships between local authorities and businesses which were formed in 2011 by the Department for Business, Innovation and Skills (BIS) to help determine local economic priorities and lead economic growth and job creation within the local areas. The SE LEP area is home to 156,000 businesses, 3.9 million people and some 1,526,000 people work within the LEP area, contributing £63bn Gross value added (GVA) representing 5% of the national contribution.²⁰ Whilst there are large urban areas within Kent, the rural areas of Kent are significant with 85% of the county defined as rural.

6.6 Flood risk

6.6.1 The National Planning Policy Framework⁸ (NPPF) states development should be directed away from areas at highest risk from flooding, and should “*not to be allocated if there are reasonably available sites appropriate for the proposed development in areas with a lower probability of flooding*”. Where development is necessary, it should be made safe without increasing levels of flood risk elsewhere.

6.6.2 The NPPF also states that Local Plans should also take account of the effects of climate change in the long term, taking into account factors such as flood risk, coastal change, water supply and changes to biodiversity and landscape. Planning authorities are encouraged to ‘adopt proactive strategies’ to adaptation. New developments should be planned so that they avoid increased vulnerability to climate change impacts. Where new development is at risk to such impacts, this should be managed through adaptation measures including the planning of green infrastructure.

¹⁸ BIS (2010) Local Growth White Paper [online] available at <http://www.bis.gov.uk/assets/BISCore/economic-development/docs/L/cm7961-local-growth-white-paper.pdf>

¹⁹ Federation of Small Businesses (2012) The Missing Links - Revitalising our rural economy [online] available at: http://www.fsb.org.uk/policy/assets/rural_report_web_final_proof.pdf (accessed 08/2012)

²⁰ <http://www.keb.org.uk/lep/>

6.6.3 The Flood and Water Management Act²¹ sets out the following approaches to flood risk management:

- Incorporating greater resilience measures into the design of new buildings, and retro-fitting at risk properties (including historic buildings);
- Utilising the environment, such as management of the land to reduce runoff and harnessing the ability of wetlands to store water; and
- Identifying areas suitable for inundation and water storage.

6.7 Land

6.7.1 Key messages from the National Planning Policy Framework⁸ (NPPF) include -

- Protect and enhance soils.
- Prevent new or existing development from being 'adversely affected' by the presence of 'unacceptable levels' of soil pollution or land instability and be willing to remediate and mitigate 'despoiled, degraded, derelict, contaminated and unstable land, where appropriate'.
- The value of best and most versatile agricultural land should also be taken into account.

6.7.2 In *Safeguarding our Soils: A strategy for England*²², a vision is set out for the future of soils in the country. An element of this vision is the condition of soils in urban areas, which are to be 'sufficiently valued for the ecosystem services they provide and given appropriate weight in the planning system'. Good quality soils in urban areas are recognised as being 'vital in supporting ecosystems, facilitating drainage and providing urban green spaces for communities'. That planning decisions take sufficient account of soil quality is a concern of the report, in particular in cases where 'significant areas of the best and most versatile agricultural land are involved'. Preventing the pollution of soils and addressing the historic legacy of contaminated land is another element of the reports vision. Changing demands on our soils need to be better understood and it must be ensured that 'appropriate consideration is given to soils in the planning process'.

6.8 Landscape and the historic environment

6.8.1 The National Planning Policy Framework⁸ (NPPF) states that Local planning authorities should set out strategic policies to deliver the conservation and enhancement of the natural and historic environment, including landscape.

6.8.2 Local Authorities should adopt policies and measures for the protection, management and planning of all landscapes, whether outstanding or ordinary, that determine the quality of people's living environment.²³

6.8.3 In terms of the historic environment, the NPPF states that Local planning authorities should set out strategic policies to deliver the conservation and enhancement of the natural and historic environment, including landscape. The NPPF goes on to say that Local Plans should present a 'positive strategy' for the 'conservation and enjoyment of the historic environment', including those heritage assets that are most at risk. Assets should be recognised as being an 'irreplaceable resource' that should be conserved in a 'manner appropriate to their significance', taking account of 'the wider social, cultural, economic and environmental benefits' that conservation can bring, whilst also recognising the positive contribution new development can make to local character and distinctiveness.

²¹ Flood and Water Management Act (2010) [online] at: <http://www.legislation.gov.uk/ukpga/2010/29/contents> (accessed 08/12)

²² Defra (2009) *Safeguarding our Soils: A strategy for England* [online] available at: <http://archive.defra.gov.uk/environment/quality/land/soil/documents/soil-strategy.pdf> (accessed 11/2012)

²³ Council of Europe (2000) *The European Landscape Convention* [online] available at: <http://conventions.coe.int/Treaty/en/Treaties/Html/176.htm> (accessed 08/2012)

- 6.8.4 The NPPF attaches great importance to the design of the built environment. It explains how good design is a key aspect in sustainable development, and how development should improve the quality of the area over its lifetime, not just in the short term. Good architecture and landscaping are important, with the use of design codes contributing to the delivery of high quality outcomes. Design should reinforce local distinctiveness, raise the standard more generally in the area and address the connections between people and places.

6.9 Transport

- 6.9.1 ‘Growth without gridlock: A transport delivery plan for Kent’ establishes that “*Transport is vital not as an end in itself but as an enabler of economic growth and regeneration and many essential social activities.*” The role of transport includes:²⁴

- Managed Economic Growth
 - Sustainable economic growth and regeneration is reliant on comprehensive and resilient transport networks. They support clusters of economic activity, expand labour market catchments, and facilitate business-to-business interactions. In order to achieve the scale of economic growth necessary to support sustainable development in the County’s Growth Areas and the regeneration of coastal towns, it is vital that business and retail sites are well connected.
- Supporting Independence
 - Kent has an ageing population and forecasts predict that the older age groups will be found in Thanet, Shepway, Canterbury and Dover with predominately younger populations in Ashford and Dartford. Differences in population across Kent need to be taken into account when considering improvements to the transport network, especially relating to access to key services, vulnerability and personal safety.
- Rural Issues
 - Some 85% of Kent’s land area is classified as rural and almost 30% of the County’s residents live in rural areas. While several of Kent’s districts regularly top national surveys measuring quality of life and the wealth of residents, almost half of the South East’s worst areas of rural disadvantage are to be found in Kent. These are concentrated in the districts of Ashford, Shepway and Swale. Kent also has a significant number of rural residents with few skills and qualifications. Other important issues relate to the impact of traffic on rural roads, especially lorries using inappropriate narrow lanes and speeding on remote country roads.
- Health and Road Safety
- Climate change mitigation

6.10 Water

- 6.10.1 The NPPF⁸ states that local authorities should produce strategic policies to deliver the provision of a variety of infrastructure, including that necessary for water supply and should encourage and incentivise water efficiency measures at the demand side²⁵.
- 6.10.2 The EU’s ‘*Blueprint to Safeguard Europe’s Water Resources*’²⁶ highlights the need for Member States to reduce pressure on water resources, for instance by using green infrastructure such as wetlands, floodplains and buffer strips along water courses. This would also reduce the EU’s vulnerability to floods and droughts. It also emphasises the role water efficiency can play in reducing scarcity and water stress.

²⁴ Available at: <https://shareweb.kent.gov.uk/Documents/News/growth-without-gridlock.pdf>

²⁵ Defra (2011) Water for life (The Water White Paper) [online] available at: <http://www.official-documents.gov.uk/document/cm82/8230/8230.pdf> (accessed 08/2012)

²⁶ European Commission (2012) A Blueprint to Safeguard Europe’s Water Resources [online] available at http://ec.europa.eu/environment/water/blueprint/pdf/COM-2012-673final_EN_ACT-cov.pdf (accessed 11/2012)

7 WHAT'S THE SUSTAINABILITY 'BASELINE'?

The SA Report must include...

- The relevant aspects of the current state of the environment and the likely evolution thereof without plan implementation
- The environmental characteristics of areas likely to be significantly affected
- Any existing environmental problems which are relevant to the plan including, in particular, those relating to any areas of a particular environmental importance

7.1 Introduction

7.1.1 The baseline review is about expanding on the consideration of problems/issues presented above so identified through context review so that they are locally specific. A detailed understanding of the baseline can aid the identification and evaluation of 'likely significant effects' associated with the draft plan / alternatives.

7.2 Biodiversity

7.2.1 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 proximity to mainland Europe.

7.2.2 Natura 2000 habitat is concentrated around the coast, particularly around the Thames Gateway (much within Medway UA), The Isle of Thanet and the Stour Estuary and Dungeness. Sites of Special Scientific Interest (SSSI) cover 8.5% of the county and the county has about 10% of the national resource of ancient woodland.

7.2.3 The contribution that biodiversity on brownfield land makes to the quality of biodiversity across the County is also notable. The Thames Gateway is acknowledged for its national importance due to its brownfield land biodiversity and has been designated as a UK BAP priority habitat for its open mosaic habitat on previously developed land.

7.2.4 The establishment of SSSIs in the county is deemed to have been overall a success, helping to protect a range of very threatened habits. However, the last century has seen major losses²⁷ and declines of species within Kent. Amongst the most important drivers of biodiversity loss in Kent are:²⁸

- The direct loss of land of value to wildlife to built development or intensive farming. This has reduced and fragmented populations of wild plants and animals.
- The effects of climate change. This increasingly determines which species are, and are not, able to successfully live in Kent.

7.2.5 The UK Climate Change Risk Assessment (2011) finds that risks to biodiversity will result from:

- Shifting 'climate envelopes' (i.e. the geographical area within which climatic conditions are suited to species) that species populations are unable to track because of habitat fragmentation (i.e. because species populations are isolated within habitat patches).
- low water levels and reduced river flows presenting a risk to freshwater habitats due to increased concentration of pollutants from agriculture, sewage and air pollution.

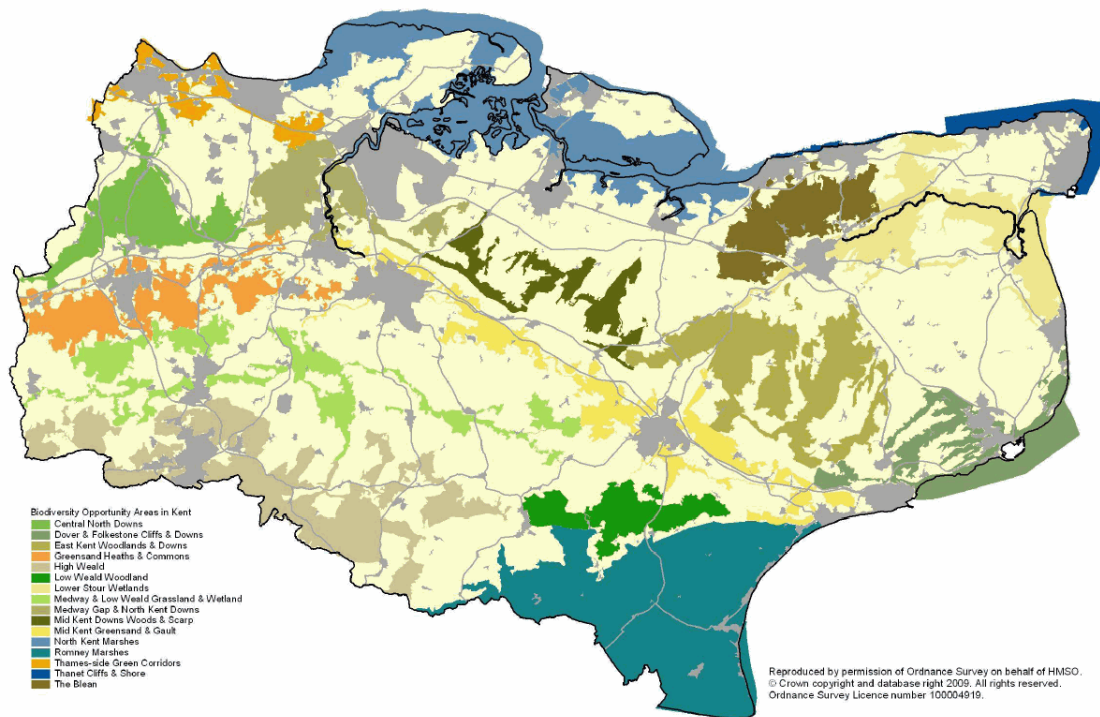
²⁷ For instance, thirty species of wild plant, eight species of butterfly, one amphibian, one reptile, ten bird species, and two species of bat have become extinct in the County during the 20th century

²⁸ Kent Biodiversity Partnership (2011) The State of Kent's Wildlife in 2011 [online] available at: [http://www.kentbap.org.uk/images/uploads/The_State_of_Kents_Wildlife_in_2011_\(June_2011\)_small.pdf](http://www.kentbap.org.uk/images/uploads/The_State_of_Kents_Wildlife_in_2011_(June_2011)_small.pdf)

7.2.6 Targeted action is underway to conserve and enhance the Borough’s primary assets through a number of initiatives, most notably the Greater Thames Marshes Nature Improvement Area and the Greater Thames and Kent Local Nature Partnerships.

7.2.7 Furthermore, the South East Biodiversity Strategy (2009) identified areas of greatest biodiversity opportunity. These areas form the focus for the delivery of BAP targets in the region. 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).²⁹ The distribution of these BOAs across the County is shown below in **Figure 7.1**

Figure 7.1: Distribution of Biodiversity Opportunity Areas in Kent³⁰



7.2.8 The Greater Thames Marshes is designated as a Nature Improvement Area (NIA). The area is described as:³¹

- Sitting within a unique yet fractured landscape
 - 48,981ha used for agriculture, housing, public access, green infrastructure, recreation, shipping, landfill, flood management, and other commercial uses.
- Highly designated
 - With more than 21 SSSI’s, one SAC, six SPA’s, five Ramsar sites, four National Nature Reserves, five Local Wildlife Sites, four World Heritages Sites.
- Underperforming
 - Biodiversity is in decline and struggling to compete with the increasing pressures in the Thames Gateway and south east. Problems include habitat loss and disturbance due to developments and infrastructure and the impacts of climate change.³²

²⁹ Dartford Borough Council (2010) Biodiversity and Landscape Technical Paper [online] available at: http://www.dartford.gov.uk/_data/assets/pdf_file/0020/63326/EB39DartfordsNaturalEnvironmentBiodiversityandLandscapeBackgroundPaper2010.pdf Accessed 09/2012

³⁰ Kent Wildlife Trust (2009) Mapping a living landscape [online] available at: <http://www.kentwildlifetrust.org.uk/conservation/living-landscapes/mapping-living-landscape> (accessed 08/2013)

³¹ See <http://www.thamesweb.com>

7.3 Climate change

7.3.1 In 2010, the estimate of carbon dioxide emissions for Kent County was 7.7 tonnes per capita. Since 2008 there has been a reduction of 0.8 tonnes per capita. Nonetheless, these figures remain higher than regional and national emission levels (Table 7.1 below)³³

Table 7.1: CO2 emissions per capita in Kent in comparison to regional and national figures³³

	2008	2009	2010
Kent County	8.5	7.3	7.7
South East	7.6	6.8	7.1
England	8.0	7.2	7.4

7.3.2 Kent has the largest total carbon emissions of any County, with 11,879 kilotonnes of CO2 released in 2008. 3,568 kilotonnes of this was due to transport, which places Kent in the middle of the national table in terms of transport emissions per head of population. Up to 250,000 extra journeys per day could be made on the County's transport network 2026 following housing and employment growth in the County.³⁴

7.3.3 Climate change mitigation is likely to increase as an 'issue' as the impacts are increasingly felt. The 2009 UK Climate Change Projections predict that (by 2080):

- Winters are likely to be warmer by around 2.2°C.
- Summers are likely to be hotter by around 2.8°C.
- Winter rainfall is likely to increase by 16%.
- Summer rainfall is likely to decrease by 19%.

7.3.4 The findings of the 2009 projections also highlight the likely increased vulnerability of Kent to extreme weather events, including more 'very hot' days; more intense downpours of rain (flash flooding); increased flood events (including coastal flooding); and changes in storminess and high winds. It is expected that the geographical location of Kent, its high population and its long coast line will lead to the County suffering from some of the most severe impacts of climate change in the UK.

7.4 Community and well-being

7.4.1 Kent had an estimated population of 1,466,500 in mid-2011. At this point 62.6% of the population is aged 16 to 64, compared with 63.7% in the South East region and 64.7% in England. Between mid-2002 and mid-2011 Kent had an increase in population of 127,500 (9.5%). This compares with an increase for the South East region of 7.6%. 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%).³⁵

7.4.2 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 affordability of housing. Sevenoaks and Dover having the strongest rural elements, whilst the vast majority of rural areas in Kent are best described as 'less sparse'.

³² Greening the Gateway (2010) Greater Thames Marshes NIA [online] available at: <http://gtgkm.org.uk/greater-thames-marshes-nia/>

³³ ONS (2013) Neighbourhood Statistics – Local profiles: Environment theme [online] available at: <http://neighbourhood.statistics.gov.uk/dissemination/Info.do?m=0&s=1373450973322&enc=1&page=analysisandguidance/analysisarticle/local-authority-profiles.htm&nsjs=true&nsck=false&nssvg=false&nswid=1276> (accessed 08/2013)

³⁴ Kent County Council (2011) Local Transport Plan for Kent 2011-16 [online] available at: <https://shareweb.kent.gov.uk/Documents/roads-and-transport/road-policies/local-transport-plan-3/final-ltp3.pdf> (accessed 08/2013)

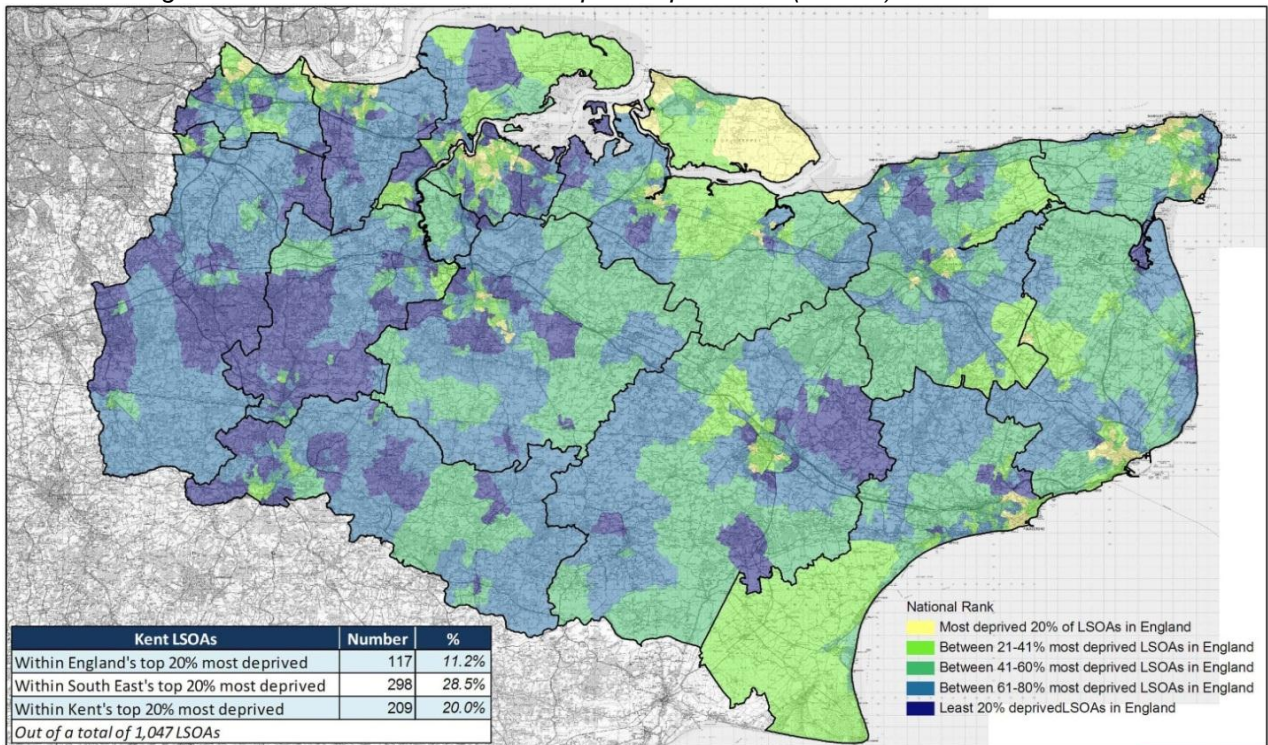
³⁵ ONS (2013) Neighbourhood Statistics – Local profiles: Demography theme [online] available at: <http://neighbourhood.statistics.gov.uk/dissemination/Info.do?m=0&s=1373450973322&enc=1&page=analysisandguidance/analysisarticle/local-authority-profiles.htm&nsjs=true&nsck=false&nssvg=false&nswid=1276> (accessed 08/2013)

³⁵ <http://www.keb.org.uk/lep/>

7.4.3 In terms of the Index of Multiple Deprivation (IMD), Kent ranks 102nd out of 152 county and unitary authorities, placing it within England’s least deprived third of authorities. In 2007 the KCC area ranked 106th. A move of four positions up the national ranking in IMD2010 means that relative to other areas, Kent is more deprived in IMD2010 than it was in IMD2007. Districts in east and north Kent are more deprived than those districts located in the west and south of the county. Thanet is Kent’s most deprived district and is ranked 49th out of 326 authorities in England placing it within England’s 20% most deprived authorities (the only Kent district within this quintile). Sevenoaks is Kent’s least deprived district and is ranked 276th out of 326 authorities in England placing it within England’s 20% least deprived authorities along with Tonbridge & Malling (ranked 268th). Shepway has seen the greatest increase moving from national rank 114th (out of 326) to rank 97th in IMD2010. Deprivation levels have decreased in four Kent districts, relative to other areas in England. Tonbridge & Malling has seen the greatest decrease moving from national rank 256th to rank 268th in IMD2010.

7.4.4 As shown by **Figure 7.2**, 11% of Kent’s LSOAs (94 areas) are amongst England’s most deprived 20%. This is 16 more areas than there were in IMD 2007 (78 areas). The most deprived LSOA within Kent based on the overall IMD for 2010 is Thanet 003A within Margate Central ward. Within the same ward, the most deprived LSOA in ID2007 was Thanet 001E.

Figure 7.2: National rank of Lower Super Output Areas (LSOAs) in Kent based on IMD 2010



Source: English Indices of Deprivation 2010, Communities and Local Government (CLG)
 Produced by Research & Intelligence, Kent County Council
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7.4.5 The life expectancy at birth for males (79.1 years) and females in Kent (82.7 years) is less than that for South East (79.7 years and 83.5 years respectively).³⁶ 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.³⁷

³⁶ ONS (2013) Neighbourhood Statistics – Local profiles: Demography theme [online] available at: <http://neighbourhood.statistics.gov.uk/dissemination/info.do?m=0&s=1373450973322&enc=1&page=analysisandguidance/analysisarticles/local-authority-profiles.htm&njs=true&nsck=false&nssvg=false&nswid=1276> (accessed 08/2013)

³⁷ NHS (2012) Health profiles: Kent [online] available at: http://www.apho.org.uk/default.aspx?QN=HP_METADATA&ArealD=50246 (accessed 08/2013)

7.4.6 Over the last 10 years, all-cause mortality rates have fallen. Early death rates from cancer and from 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 'healthy eating' and obesity are worse than the England average.³⁷

7.4.7 Climate change projections highlight an increase in risk to people, property and the environment from flooding; and hotter and sunnier summers putting public health and safety at greater risk. The projections also highlight that predicted hotter summers could cause greater "heat stress" to buildings, utilities and the transport system.

7.5 Sustainable economic growth

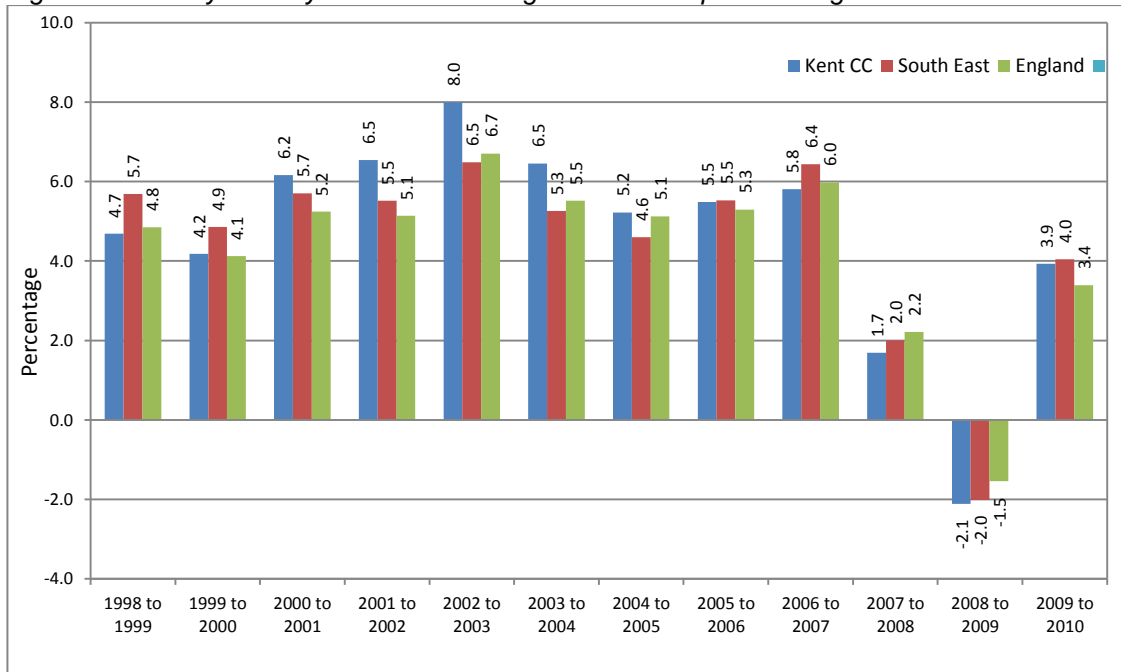
7.5.1 The total Gross Value Added (GVA) for Kent in 2010 (£25 billion) represented 13.5% of the total GVA for the South East region. Between 1998 and 2010, the total GVA for Kent increased at an average nominal rate of 4.6% per year. This is greater than the average annual change in the South East (4.5%) and greater than in England (4.3%). A clear fall in GVA growth can be seen during 2007-2008 followed by a decline in 2008-2009 during which time the Kent and the South East economies shrunk faster than the national rate (**Figure 7.3**). However, during 2009-2010 GVA growth in Kent and the South East was stronger than that in England.³⁸

7.5.2 In 2010, the Public administration, education and health sector made up the largest percentage share of the total GVA in Kent (21.5%). Between 1998 and 2010, the GVA of this industry group increased at an average annual rate of 6.5%. The second largest industry group in 2010 was 'Distribution, transport, accommodation, and food' accounting for 21% of the total GVA for Kent. Between 1998 and 2010, the GVA of this industry group increased at an average annual rate of 3.9%. The Information and communication sector showed the largest percentage increase between 1998 and 2010 with an average annual change of 7.5%.³⁹

³⁸ ONS (2013) Neighbourhood Statistics – Local profiles: Economic context theme [online] available at: <http://neighbourhood.statistics.gov.uk/dissemination/Info.do?m=0&s=1373450973322&enc=1&page=analysisandguidance/analysisarticles/local-authority-profiles.htm&nsjs=true&nsck=false&nssvg=false&nswid=1276> (accessed 08/2013)

³⁹ ONS (2013) Neighbourhood Statistics – Local profiles: Economic context theme [online] available at: <http://neighbourhood.statistics.gov.uk/dissemination/Info.do?m=0&s=1373450973322&enc=1&page=analysisandguidance/analysisarticles/local-authority-profiles.htm&nsjs=true&nsck=false&nssvg=false&nswid=1276> (accessed 08/2013)

Figure 7.3: GVA year-on-year nominal change in Kent compared to regional & national levels



- 7.5.3 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. In 2011, the GDHI per head in Kent grew closer towards the UK average, whilst that of the South East diverged further.⁴⁰
- 7.5.4 In 2011, Kent County had more enterprise start-ups (6,190) than closures (5,600). This represents a 1% increase in the Counties total stock of enterprises, which was a lower net change than that achieved at the regional and national level (1.3% and 1.5% respectively). 2011 was the first year since 2008 that the birth of enterprises in the Kent exceeded the number of deaths (Table 7.2 below).⁴¹

 Table 7.2: Birth and death rate of enterprises in Kent in comparison to regional and national figures – green shading indicates growth in enterprises, red shading shows a decline⁴¹

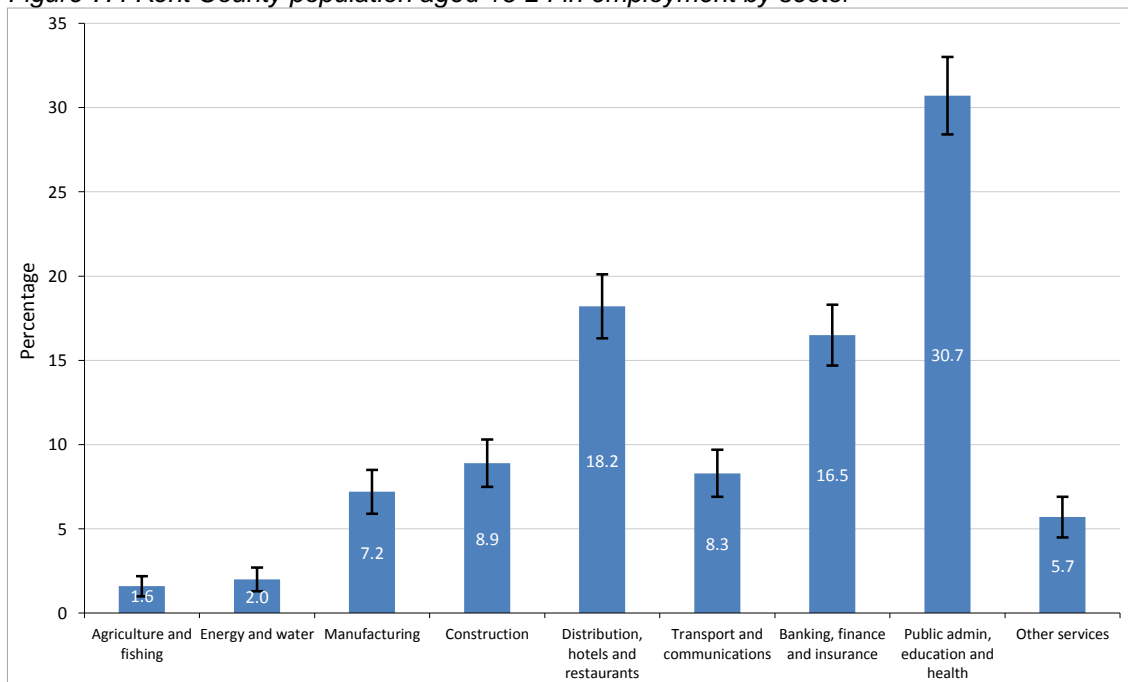
	2007		2008		2009		2010		2011	
	Births	Deaths	Births	Deaths	Births	Deaths	Births	Deaths	Births	Deaths
Kent County	6,785	5,680	6,170	5,390	5,445	6,340	5,380	5,865	6,190	5,600
South East	42,320	35,090	40,365	33,790	36,320	42,550	36,910	38,345	40,775	35,915
England	246,700	199,300	236,345	196,695	209,035	247,150	207,520	219,920	232,460	202,365

⁴⁰ ONS (2013) Neighbourhood Statistics – Local profiles: Economic context theme [online] available at: <http://neighbourhood.statistics.gov.uk/dissemination/Info.do?m=0&s=1373450973322&enc=1&page=analysisandguidance/analysisarticle/local-authority-profiles.htm&nsjs=true&nsck=false&nssvg=false&nswid=1276> (accessed 08/2013)

⁴¹ ONS (2013) Neighbourhood Statistics – Local profiles: Enterprise theme [online] available at: <http://neighbourhood.statistics.gov.uk/dissemination/Info.do?m=0&s=1373450973322&enc=1&page=analysisandguidance/analysisarticle/local-authority-profiles.htm&nsjs=true&nsck=false&nssvg=false&nswid=1276> (accessed 08/2013)

- 7.5.5 During the period October 2011 to September 2012, the employment rate for the resident population in Kent was 71.1%, a lower figure than that of the South East (74.6%) but not significantly different than that of England (70.7%). Between October 2007 and September 2012 the annual employment rate in Kent decreased by 2.7 percentage points. Over the same period the employment rate of the South East and England fell by 1.9%.⁴²
- 7.5.6 In Kent, the unemployment rate for October 2011 to September 2012 was 7.4% of the population aged 16 years and over. For the same period, this was greater than the rate for the South East region (5.8%), but not significantly different to that of England (7.9%). Over the period from October 2007 to September 2012 the estimated unemployment rate in Kent increased by 2 percentage points. This was greater than the regional change in unemployment over the same period (plus 1.5 percentage points), but less than the national change (plus 2.5 percentage points).⁴²
- 7.5.7 In 2011 in Kent County, the Public administration, education and health sector employed the highest proportion of persons aged 16 to 64 (30.7%). The Agriculture and fishing sector showed the lowest proportion of the population aged 16 to 64 in employment (1.6%) (Figure 7.4 below). These are also the lowest and highest employers at the regional and national levels. Nonetheless employment in the Agriculture and fishing sector was around twice as high in Kent (1.6%) than regionally (0.8%) or nationally (0.9%). Other notable differences include Kent's lower level of manufacturing employment (7.2%) compared to regional (8.6%) and national figures (10%). In addition, the proportion of people in employment in the Construction sector in Kent is 8.9%, which is more than that for the South East region (7.4%) and England (7.2%).⁴¹

Figure 7.4 Kent County population aged 16-24 in employment by sector⁴³



⁴² ONS (2013) Neighbourhood Statistics – Local profiles: Economic context theme [online] available at: <http://neighbourhood.statistics.gov.uk/dissemination/Info.do?m=0&s=1373450973322&enc=1&page=analysisandguidance/analysisarticles/local-authority-profiles.htm&njs=true&nsck=false&nssvg=false&nswid=1276> (accessed 08/2013)

⁴² Kent Economic Board (2011) South East Local Enterprise Partnership [online] available at: <http://www.keb.org.uk/lep/> (accessed 08/2013)

⁴³ ONS (2013) Neighbourhood Statistics – Local profiles: Enterprise theme [online] available at: <http://neighbourhood.statistics.gov.uk/dissemination/Info.do?m=0&s=1373450973322&enc=1&page=analysisandguidance/analysisarticles/local-authority-profiles.htm&njs=true&nsck=false&nssvg=false&nswid=1276> (accessed 08/2013)

7.5.8 Between 2011 and 2021, the number of households is projected to increase in Kent from 606,700 to 685,100, a 12.9% increase. This is greater than the percentage increase in South East (10.8%).⁴⁴ Planned economic growth is reflected in housing targets set out within adopted Local Plans and proposed by emerging Local Plans around Kent – see **Table 7.3**.

Table 7.3: A brief review of local authority housing targets

Authority	Housing targets	Notes
Dartford	The adopted Core Strategy (2011) sets a target of 867 d.p.a. 17,140 are allocated to the Thames Gateway, and the remaining 200 to the rural area south of the A2.	
Sevenoaks	The adopted Core Strategy (2011) sets a target of 165 d.p.a. Focused entirely within existing built up areas (predominantly Sevenoaks and Swanley).	
Tonbridge and Malling	Provision is made for the development of at least 425 d.p.a. Concentrated within the confines of the urban areas of: Tonbridge; the Medway Gap; and the part of the Medway Towns urban area.	
Gravesham	The proposed submission Core Strategy (2012) suggests a target of at least 271 d.p.a. Focused on four urban opportunity areas within Gravesend, with the remainder to be met primarily in the rest of the urban area.	
Tunbridge Wells	The adopted Core Strategy (2010) sets a target of 300 d.p.a. Concentrated at Royal Tunbridge Wells and South borough to support the 'Regional Hub' role within Tonbridge.	
Medway	The Submission Draft of the Core Strategy (2012) suggests a target of 814 d.p.a. Focused in the Thames Gateway. Only around 624 units in total are expected to be built in the 'rest of' area (much of which will be at the former Cemex cement plant at Halling). ⁴⁵	
Maidstone	A draft Local Plan was published for consultation (Regulation 18) in 2014. Objectively Assessed Housing Need is identified as being 980 dpa ; however, the plan only looks to make provision for 855 dpa . A call for sites is underway to establish whether further capacity exists, or whether there will be a need to plan for unmet need. An expanded Maidstone urban area will be the principal focus for development in the borough.	
Swale	A consultation draft of the Local Plan (2013) suggests a target of 540 d.p.a. Growth will be focused on the principal town of Sittingbourne, followed by the other Borough urban centres of Faversham and Sheerness.	
Ashford	The adopted Core Strategy (2008) is currently being reviewed. The Council states that " <i>Crucial to the Local Plan to 2030 is estimating the growth expected in the economy of the area and the number of new homes that will be needed.</i> "	
Canterbury	A draft Local Plan (2013) suggests a target of 780 d.p.a. The urban areas of Canterbury, Herne Bay and Whitstable will be the principal focus for development, with a particular focus at Canterbury.	
Shepway	The Submitted Core Strategy (2012) suggests a minimum target of 350 d.p.a. Focused at Folkestone, Shorncliffe Garrison and Hythe.	
Dover	The adopted Core Strategy (2010) sets a target a minimum target of 10,100 dwelling by 2026, with and allocated for 14,000 dwellings. The majority of development will take place at Dover with levels of development also taking place at Deal along with the Rural, Local Service Centres and Villages dependent on their roles.	
Thanet	A 2010 consultation sought views on a housing figure of 375 d.p.a (as per the South East Plan target).	

⁴⁴ ONS (2013) Neighbourhood Statistics – Local profiles: Economic context theme [online] available at:

<http://neighbourhood.statistics.gov.uk/dissemination/Info.do?m=0&s=1373450973322&enc=1&page=analysisandguidance/analysisarticles/local-authority-profiles.htm&nsjs=true&nsck=false&nssvg=false&nswid=1276> (accessed 08/2013)

⁴⁵ The Council has been instructed to withdraw its housing strategy and prepare a new plan following the rejection of the Lodge Hill site in Chattenden. See Laura Graham (2013) LDF Examination: Medway Council – Inspectors letter [online] available at: <http://www.medway.gov.uk/pdf/Letter%20to%20Medway%20Council%2021%20June%202013.pdf> (accessed 09/2013)

7.6 Flood risk

7.6.1 Information about flood risk in the County is contained within the four Catchment Flood Management Plans (CFMPs) that cover Kent. The sources of flood risk and areas most at risk of river flooding within each CMFP are detailed in Table 7.4 below.

Table 7.4: Areas most at risk of river flood in each on the CFMP.

CFMP	Main sources of flood risk	Main area of risk (>500 properties at risk of a 1 in 100 year flood)
North Kent ⁴⁶	River flooding along the Darent and combinations of fluvial and surface water flooding in the Cray and Shuttle sub-area.	Dartford and Ebbsfleet, Shuttle and Upper Cray, North Kent Marshes (>1000); Upper Darent and tributaries (500-1000)
River Medway ⁴⁷	Flood risk is concentrated in Edenbridge, Tonbridge, and the confluence of the tributaries near Collier Street, East Peckham and Yalding.	None (>1000); Tonbridge, Collier St, Yalding, East Peckham (500 - 1000)
Rother and Romney ⁴⁸	Significant flooding problems are associated with the urban areas of Robertsbridge, Etchingham and Hamstreet.	Rye, Hythe and Folkestone (>1000); None (500-1000)
River Stour ⁴⁹	Main flood risks come either from the River Stour during prolonged rainfall, or from flash flooding on the short steep rivers in the coastal towns.	Ashford and Canterbury (>1000); Dover (500-1000)

7.6.2 Kent is considered to be the most at risk lead local flood authority in England with approximately 76,000 properties estimated to be at risk of surface water flooding. Local flooding has had a significant impact on the people and economy of Kent, with such effects predicted to increase due to climate change. Also, increasing development and changing land use practices are also likely affect the way the land is able to naturally respond to rainfall.⁵⁰

7.6.3 Kent is currently estimated to have approximately 64,000 properties⁵¹ at risk of river and coastal flooding, of which approximately 46,000 are residential properties. The presence of major aquifers in Kent, the chalk of the North Downs and the sandstone of the High Weald, mean that there is a risk of groundwater flooding in some parts of Kent.

7.6.4 In terms of coastal flooding 10% of Kent's population was regarded as being at risk in 2001, representing 161,532 people. The annual sea level rise in Southern England is about 6mm, of which 4.5mm is attributed to climate change. This may lead to increased risk of breaching of defences and flooding without action.⁵²

⁴⁶ Environment Agency (2009) North Kent Rivers Catchment Flood Management Plan [online] available at: <http://a0768b4a8a31e106d8b0-50dc802554eb38a24458b98ff72d550b.r19.cf3.rackcdn.com/geso1008bowk-e-e.pdf> (accessed 09/2013)

⁴⁷ Environment Agency (2009) River Medway Catchment Flood Management Plan

⁴⁸ Environment Agency (2009) Rother and Romney Catchment Flood Management Plan [online] available at: <http://www.shepway.gov.uk/webapp/lydd-airport/CORE%20DOCS/CD12/CD12.11%20Rother%20and%20Romney%20CFMP.pdf> (accessed 09/2013)

⁴⁹ Environment Agency (2009) River Stour Catchment Flood Management Plan [online] available at: <http://a0768b4a8a31e106d8b0-50dc802554eb38a24458b98ff72d550b.r19.cf3.rackcdn.com/geso1008bowl-e-e.pdf> (accessed 09/2013)

⁵⁰ Kent County Council (2013) Local flood risk management strategy [online] available at:

<https://shareweb.kent.gov.uk/Documents/environment-and-planning/flooding/Kent%20Local%20Flood%20Risk%20Management%20Strategy%20-%20Report.pdf> (accessed 09/2013)

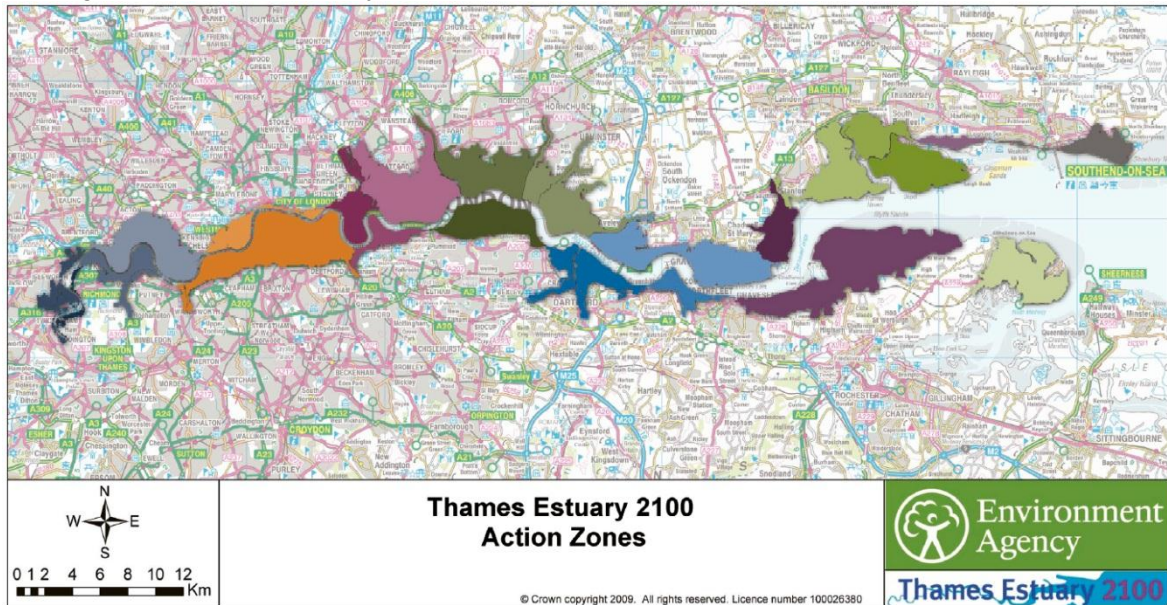
⁵¹ Some of these properties will also be at risk of surface water flooding. As such, this number should not be added to the surface water figure to give a total.

⁵² Kent Coastal Network (2009) Coastal management fact sheet: Kent [online] available at:

http://www.kent.gov.uk/environment_and_planning/wildlife_and_landscapes/coasts/coastal_flooding_and_erosion.aspx (accessed 09/2013)

7.6.5 The 2012 report **Thames Estuary 2100**⁵³ sets out recommendations for flood risk management for the Thames estuary through to the end of the century and beyond. The TE2100 Plan covers the tidal Thames and its floodplain from Teddington in the west, through to Sheerness / Shoeburyness in the east. Three ‘action zones’ fall within the Kent CC area – see Figure 7.5.

Figure 7.5 Thames Estuary 2100 ‘Action zones’



7.7 Land

There are relatively extensive areas of high quality (grade one) agricultural land in Kent. This land tends to be concentrated in the north of the Country, running in a band from Gillingham in the west through to Deal in the east. A pocket of high quality agricultural land can also be found in the area surrounding new Romney.⁵⁴ Climate change projections suggest a decrease in soil moisture that could adversely affect agriculture, the natural environment and landscape.

7.8 Landscape and the historic environment

7.8.1 The Kent Downs AONB covers nearly a quarter of the County, whilst the High Weald AONB is shared with East Sussex. The County is also covered by a number of National Character Areas (NCAs). These NCAs divide England into 159 distinct natural areas, with each defined by a unique combination of landscape, biodiversity, geodiversity and cultural and economic activity, as opposed to administrative boundaries. These profiles are currently under development, with revisions due to be completed by April 2014. One completed NCA profile in Kent is that of the North Downs, which notes that:⁵⁵

- The natural and cultural assets of the North Downs NCA support ecosystem services such as food production, regulation of water and soils, biodiversity, recreation, tranquillity, sense of place and sense of history;
- Development pressures and agricultural practices continue to be forces for change;
- Quality and well managed green infrastructure both within and surrounding the NCA could help to service the demands of a growing population;

⁵⁴ Kent Landscape information System (2013) [online] available at: <http://www.kent.gov.uk/klis/default.asp> (accessed 08/2013)

⁵⁵ Natural England (2013) NCA Profile:119: North Downs [online] available at: <http://publications.naturalengland.org.uk/publication/7036466?category=587130> (accessed 09/2013)

- Opportunities to create more robust and resilient ecological networks across the agricultural landscape should be maximised; and
- A changing climate and increased pressures on natural resources, including the chalk aquifer are likely to bring about change.

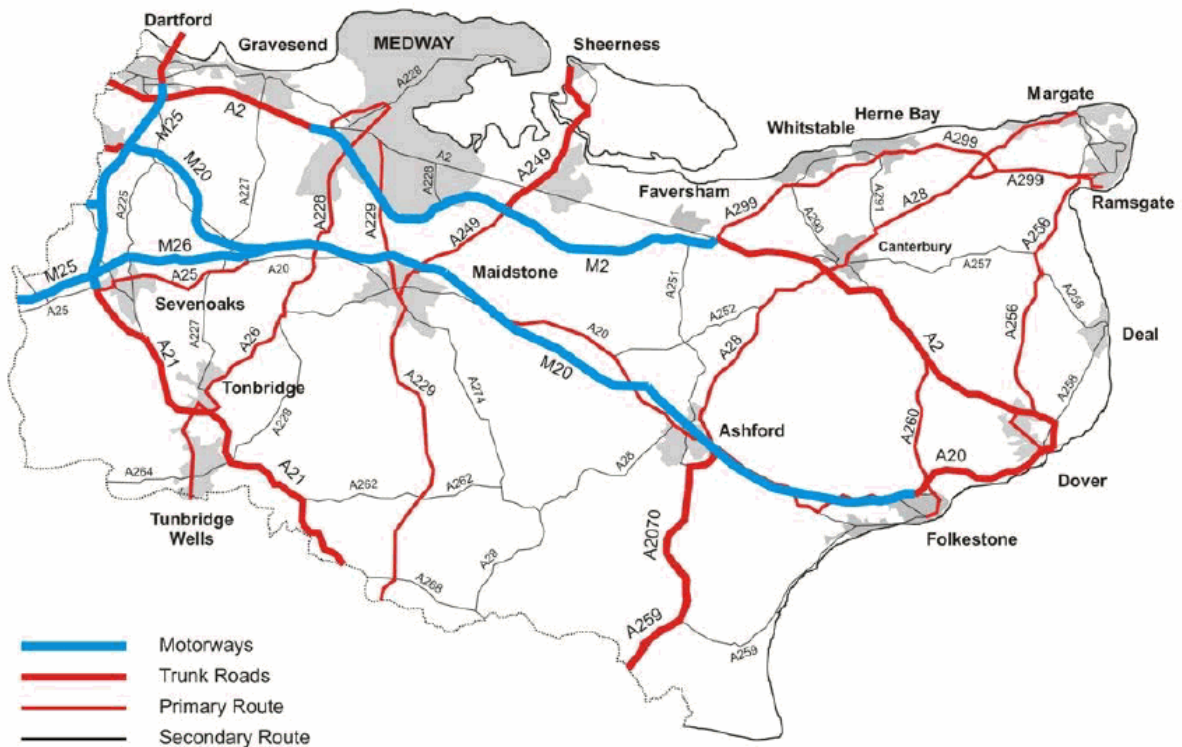
7.8.2 Green Belt is another important spatial constraint as it represents land that should be kept open in order to achieve the purposes set out within National Policy. In Kent, Green Belt comprises the majority of Sevenoaks, Tonbridge and Malling and Gravesham Districts, as well as a proportion of Tunbridge Wells and Dartford Districts.

7.8.3 In terms of the historic environment - the South East has more listed buildings than any other region other than the South West, and Kent has significantly more than any other South East county (17,205). A relatively low amount of these are found in Medway, Dartford, Gravesham Shepway and Thanet.

7.9 Transport

7.9.1 Kent has one of the most extensive highway networks in the country (Figure 7.6 below). The County’s motorway and trunk road network is over 400km in length and includes the M25, M26, M20/A20, M2/A2, A21, A249 and A259/A2070. County Primary Routes link the major urban centres. County Principal Routes form the remainder of the key arterial routes across Kent.⁵⁶

Figure 7.6: Kent’s highway network⁵⁶



⁵⁶ Kent County Council (2011) Local Transport Plan for Kent 2011-16 [online] available at: <https://shareweb.kent.gov.uk/Documents/roads-and-transport/road-policies/local-transport-plan-3/final-ltp3.pdf> (accessed 08/2013)

- 7.9.2 Kent's domestic rail network covers 100 stations and consists of a series of radial east-west routes connecting the County with London, along with branch lines linking Ashford and Hastings, Paddock Wood and Strood, Tonbridge and Redhill, and Sittingbourne and Sheerness. Commuters travelling to and from central London account for a significant proportion of rail trips. These tend to originate in the west of the County, where journey times to the capital are generally under an hour. The commencement of high speed domestic rail services using the High Speed 1 in December 2009 makes East Kent more attractive to London commuters.⁵⁷ Journey times between the capital and Ashford, Canterbury and Folkestone have been reduced to less than an hour.⁵⁷
- 7.9.3 Kent is a major gateway for the movement of international freight through the Channel Tunnel, the ports of Dover, Ramsgate and Sheerness, and Manston Airport. Road haulage is the dominant means of transport in this sector, with around 3.8 million lorries crossing the Channel in 2008. Although Kent's gateway function is vital to the national economy, the high volume of freight traffic passing through the County is also associated with poor air quality, and road traffic accidents.⁵⁷
- 7.9.4 Dover handled 2.3 million freight movements in 2008. The Port of Dover and the Channel Tunnel are the UK's principal passenger seaports. In 2009, Dover also handled 13 million passengers and almost 2.8 million cars. The Port of Ramsgate also plays an important and growing role in Kent's roll-on roll-off ferry market. Sheerness is a deep water port and one of the UK's largest import points for fruit, timber, paper products and vehicles.⁵⁷
- 7.9.5 Kent has two main airports: Manston Airport in Thanet and London Ashford Airport (LAA) at Lydd.⁵⁷ An extension to LAA has been approved by the Government. This will result in the creation of a runway extension and a new terminal with the capacity to handle up to 500,000 passengers a year.⁵⁸

7.10 Water

- 7.10.1 There are significant pressures on water resources in Kent, which affect both the water environment and water supplies. There are many catchments where there is little or no water available for abstraction during dry periods. Pressures are particularly notable in the County as it is one of the driest parts of England and Wales. This relative scarcity of supply is coupled with high population density and household water use.⁵⁹
- 7.10.2 In Kent, 73% of public water supply is taken from groundwater; most notably from chalk aquifers. The remainder of water company supply is either pumped directly to customers from rivers or into storage reservoirs.⁵⁹ Groundwater Source Protection Zones (SPZs) are primarily associated with the chalk geology of the North Downs, but that there are also some smaller SPZs in the vicinity of Tonbridge and Tunbridge Wells.
- 7.10.3 Catchment Abstraction Management Strategies (CAMS) assess the wider impacts of cumulative abstractions. These show that most of Kent's rivers experience flow stress in dry summers. There is greatest ecological pressure in the north Kent rivers; predominantly as a result of Chalk aquifer abstraction. There are very few sites available for new abstraction that would not have some impact on ecology in dry years (Figure 7.7 below). The only location showing 'water available' status is in the Lower London Tertiaries in north Kent. However, the underlying chalk aquifer is over-licensed.

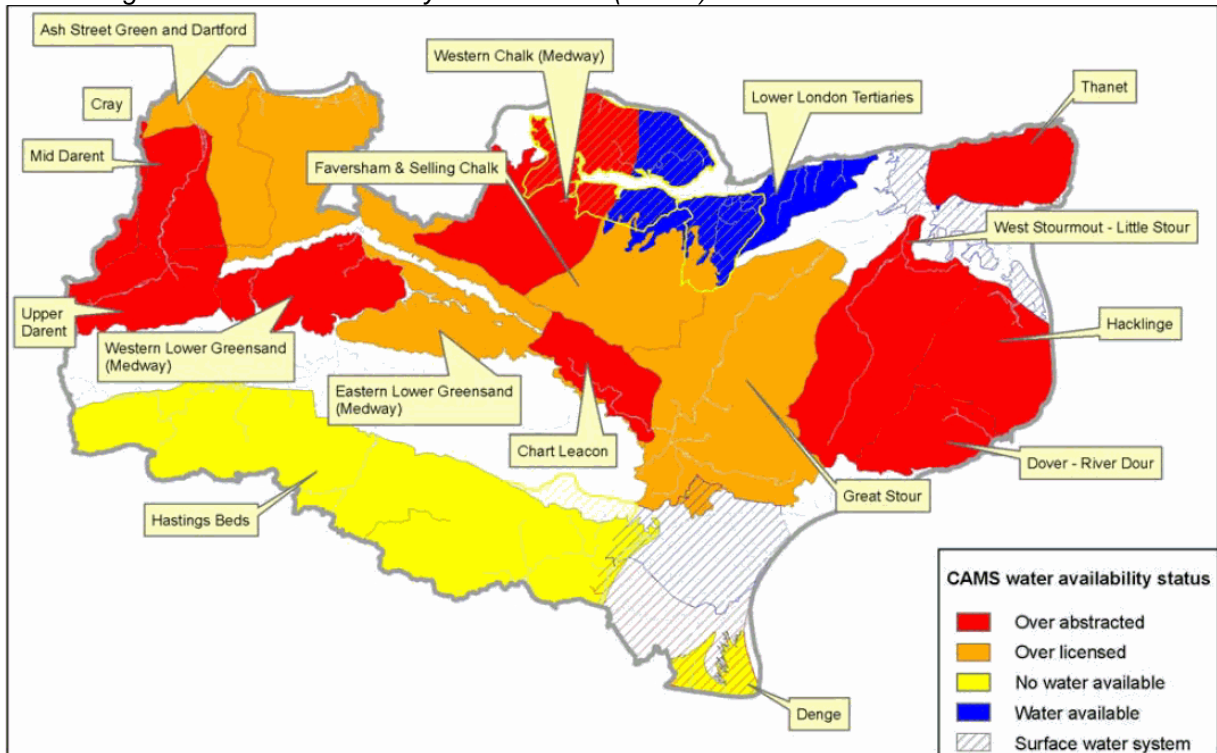
⁵⁷ Kent County Council (2011) Local Transport Plan for Kent 2011-16 [online] available at:

<https://shareweb.kent.gov.uk/Documents/roads-and-transport/road-policies/local-transport-plan-3/final-ltp3.pdf> (accessed 08/2013)

⁵⁸ Pinsent Masons (2013) London Ashford Airport expansion approved [online] available at: <http://www.out-law.com/en/articles/2013/april/london-ashford-airport-expansion-approved/> (accessed 08/2013)

⁵⁹ Environment Agency (2012) The state of water in Kent [online] available at: <https://shareweb.kent.gov.uk/Documents/environment-and-planning/environment-and-climate-change/water%20summit/state-of-water.pdf> (accessed 08/2013)

Figure 7.7: Water availability status in Kent (CAMS)⁶⁰



7.10.4 In future 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.⁶¹ Climate change projections list the risk of decreased water (particularly in summer) as an issue reduced water as a sustainability issue, exacerbated by a potential increase in demand. This may also reduce water quality, which could have implications in terms of meeting the requirements of the Water Framework Directive.

7.10.5 The Thames Gateway Delivery Plan⁶² proposes that actions are taken to work towards a programme for delivering a 'water neutral' Gateway. It notes that such an aspiration is difficult to achieve, but also that the scale of development in the Gateway provides an opportunity for the area to be an exemplar for sustainable development and encourage ambitious levels of water efficiency.

⁶⁰ Environment Agency (2012) The state of water in Kent [online] available at: <https://shareweb.kent.gov.uk/Documents/environment-and-planning/environment-and-climate-change/water%20summit/state-of-water.pdf> (accessed 08/2013)

⁶¹ Environment Agency (2012) The state of water in Kent [online] available at: <https://shareweb.kent.gov.uk/Documents/environment-and-planning/environment-and-climate-change/water%20summit/state-of-water.pdf> (accessed 08/2013)

⁶² CLG (2007) Thames Gateway: The Delivery Plan [online] available at: <http://www.medway.gov.uk/pdf/Thames%20Gateway%20Delivery%20Plan%202009.pdf> (accessed 02/2013)

8 WHAT ARE THE KEY ISSUES & OBJECTIVES THAT SHOULD BE A FOCUS?

The SA Report must include...

- Key problems / issues and objectives that should be a focus of / provide a 'framework' for appraisal

8.1.1 Drawing on the review of the sustainability context and baseline, the 2010 Scoping Report identified a list of sustainability issues and objectives that should be drawn upon as a methodological 'framework' for the appraisal. These are listed below (in a summarised and updated form) under 'topic' headings.

8.2 Sustainability issues

Biodiversity

- Ambitious BAP targets have been set, including for habitat recreation and for reducing fragmentation / 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.

Climate change

- There is the potential to promote energy from waste as well as other technologies that increase the energy efficiency of minerals and waste operations.
- Transport is a significant contributor to greenhouse gas emissions that should be addressed through the plan (see further discussion, below).

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')

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

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

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.

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.

8.3 Sustainability objectives (and sub-objectives)

N.B. This list of sustainability objectives differs from that agreed through consultation in 2009/10 in two respects: Firstly, the objective *'Plan for the correct waste management facilities, in the right place at the right time'* has been removed on the basis that this is more of a plan objective, rather than a sustainability objective (given that the role of the SA should be to consider the *implications* of the proposed approach to waste management development). Secondly, the objective *'Support the delivery of housing targets'* has been given less prominence, i.e. rather than being given stand-alone consideration it is considered alongside the 'community' related objective. This reflects the fact that the plan is unlikely to directly impact on housing delivery / housing need.

Biodiversity

- 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

Climate change

- Address the causes of climate change through reducing emissions of greenhouse gases through energy efficiency and energy generated from renewable sources
 - Recover energy from waste where possible
 - Promote sustainable design and construction of facilities and support wider efforts to reduce the carbon footprint of minerals and waste operations.

Community and well-being

- 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 and waste development does not contribute to poor air quality

Sustainable economic growth

- 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

Flood risk

- 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

Land

- Make efficient use of land and avoid sensitive locations
 - Make best use of previously developed land
 - Avoid locations with sensitive geomorphology

Landscape and the historic environment

- 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

Transport

- 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.

Water

- 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
 - Avoid pollution of ground or surface waters, particularly in areas identified as being at risk or sensitive

PART 2: WHAT HAS PLAN-MAKING / SA INVOLVED UP TO THIS POINT?

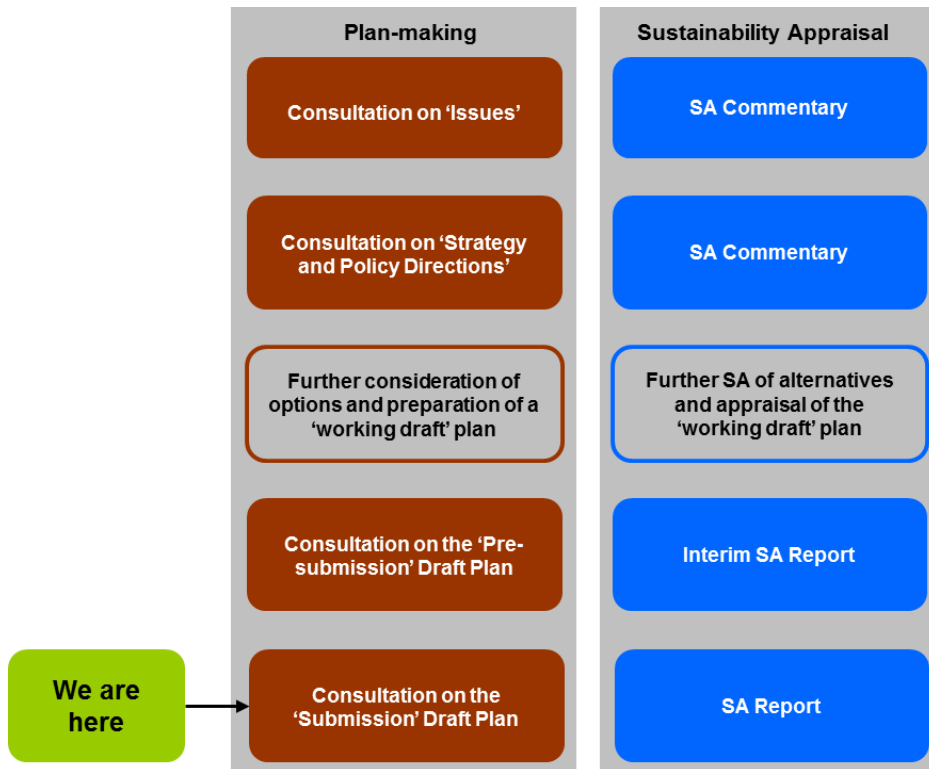
9 INTRODUCTION (TO PART 2)

The SA Report must include...

- An outline of the reasons for selecting the alternatives dealt with
- The likely significant effects on the environment associated with alternatives / an outline of the reasons for selecting preferred alternatives (and hence, by proxy, a description of how environmental objectives and considerations are reflected in the draft plan)

- 9.1.1 Plan-making has been on-going since **2009**. The first major plan-making ‘step’ was the consultation on ‘issues’, which ran between 24 September and 19 November **2010**. An ‘SA Commentary’ document was also published as part of the consultation with the intention of informing readers of the relationship between plan issues and wider sustainability issues.
- 9.1.2 The next plan-making step involved consulting on ‘strategy and policy directions’ between 31 May and 09 August **2011**. Another ‘SA Commentary’ document was published alongside the plan consultation document. The intention of the Commentary was to discuss the sustainability implications of the preferred approach and alternatives presented. Recommendations were made as to how the preferred approach might be improved.
- 9.1.3 **Between 2011 and 2013**, there was a focus on further evidence gathering, analysis and consideration of options / alternatives (informed by SA). Also, a ‘working draft’ version of the plan was appraised in 2013, with recommendations made as to how the preferred approach might be improved.
- 9.1.4 In **early 2014** a ‘Pre-submission’ Draft Plan was published for consultation, and an Interim SA Report was published alongside. The Interim SA Report set out to inform consultation and subsequent plan-making, i.e. preparation of the ‘Submission’ Draft Plan that is published for consultation at **the current time**.

Figure 9.1: Plan-making / SA up to this point



9.2 The focus of Part 2

9.2.1 The entire 'story' of plan development is important; however, in-line with Regulations, this chapter must have a particular focus on explaining the story of **alternatives** consideration that has informed preparation of the draft plan. Specifically, there is a need to: present (and explain) the alternatives considered; present appraisal findings; and explain how the appraisal has influenced plan-making.

9.2.2 Aside from alternatives appraisal, preparation of the draft plan has also been informed by iterative appraisal of *working draft* versions of the plan. This aspect of the plan-making / SA 'story' could be told here, in Part 2; however, it is more appropriate to explain the story in Part 3 (see the 'boxes' embedded within the appraisal text).

Alternatives for what?

9.2.3 The Regulations state that the SA Report should present an appraisal of the '*plan and reasonable alternatives taking into account the objectives and geographical scope of the Plan*'.⁶³ It is difficult to know precisely how to interpret this. In practice, local authorities in England tend to consider reasonable alternatives for a reasonable range of the issues addressed along the course of plan-making.

9.2.4 The plan issues for which alternatives have been formally 'SAd', and hence those that are considered further within this Part of the SA Report, are as follows:

- Sharp sand & gravel and soft sand: making provision for landbanks
- Brickearth and clay for brick and tile works
- Provision for municipal solid waste
- Landfill space for Kent's non-hazardous wastes

9.2.5 Box 9.1 discusses a number of other plan issues for which alternatives were considered at the 2011 'Preferred Options' stage (and considered in the Interim SA Report presented alongside the consultation document), but are not presented / considered in this SA Report (on the basis that there is not a 'reasonable' need to do so, given that understanding of issues and options has moved-on since 2011).

9.3 Structure of Part 2

9.3.1 For each of the plan issues listed above, the following questions are answered:

- Why have alternatives been considered for this issue?
- What are the reasonable alternatives?
- Why has the preferred approach been selected?
 - As part of the answer to this question an explanation is given as to how the selection of a preferred approach reflects the findings of SA (or otherwise).

⁶³ That 'reasonable alternatives' should take into account the objectives and geographical scope of the plan is stating the obvious. The European Guidance on Implementation of the SEA Directive gives slightly more clarity, stating that 'In practice, different alternatives within a plan will usually be assessed' (e.g. different means of waste disposal within a waste management plan...).

*Box 9.1: Outline reasons for not presenting SA of alternatives for certain plan issues in this SA Report***Strategic sites for minerals**

Various sites were suggested for consideration as a 'Strategic' site for Kent's minerals and presented within the 'Strategy and Policy Directions' consultation document. However, it is now understood that the only suggested site that could be considered to be central to the achievement of the plan is Medway Works, Holborough. Re-establishing cement manufacture in Kent is sufficiently important to the achievement of the MWLP vision and objectives to warrant the identification of the only realistic opportunity for cement manufacture as a 'strategic site'. It already has the benefit of an extant planning permission for sufficient minerals for at least 25 years supply for cement manufacture. However there would need to be significant changes agreed to the approved layout and design, which would require a fresh application being approved prior to the development of the site. Careful planning should help to maximize the job creation opportunity and secure the level of investment required to develop this site.

Sand and gravel

Various alternative approaches were presented within the 'Strategy and Policy Directions' consultation document including the approach of identifying sufficient sand and gravel sites to make provision for 10% more sand and gravel than is required in the South East Plan policy (now in the NPPF). This approach was preferred at the time on the basis that it would have provided flexibility in terms of the specific sites brought forward during the plan period. However, it is now recognised that there is a need to make provision for sufficient sand and gravel sites using the past 10 year sales data as an indicator (1.6mtpa). There is confidence that this approach will lead to sufficient headroom in the sand and gravel site allocations, i.e. ensure capacity to accommodate potentially large increases in demand during the plan period (given that the most recent annual sales data for land won aggregates in Kent identified that only circa 1mt of all land-won sand and gravel was sold). Furthermore, it is understood that a higher level of provision would not be deliverable given that a limited number of sand and gravel sites have been identified as available and deliverable.

Crushed rock (ragstone and/or underground limestone)

It is now recognised that there are no real alternatives to the stance taken (no sites to be allocated for crushed rock) as the landbank for crushed rock is more than sufficient for the entire plan period and beyond. However, to address the issue which arose during the determination of the planning application for the proposed western extension to Hermitage Quarry, a new policy is introduced in the draft Minerals and Waste Plan for land-won mineral 'exception' sites. This policy will give the flexibility required for determining applications where landbank requirements indicate that no further reserves are required, but consideration of issues of 'real need' and 'real supply' may give sufficient weight for a non-allocated site to be granted permission.

Identification of future mineral importation facilities

Three alternative approaches were considered at the time of the 'Strategy and Policy Directions' consultation. However, given that no new mineral importation facilities have been proposed during the plan making process, it is felt that there is no alternative to the preferred approach, which is to enable flexibility during the plan period. The need to consider situations where safeguarded facilities may be lost through other forms of built development and the safeguarded facility is to be replaced by an alternative wharf or railhead is reflected in Policy DM5.

Safeguarding of wharves railheads and other infrastructure

Three alternative approaches were considered at the time of the 'Strategy and Policy Directions' consultation. However, it is now recognised that there is no reasonable alternative to the preferred approach (Policy CSM11), which is to safeguard all existing facilities by name with boundaries mapped on a site by site basis taking into account the variable nature of the importation sites and conflicting nearby developments. The alternative approach of defining Mineral Consultation Areas around all safeguarded wharves and railheads would be difficult to implement, due to wide scale variations in existing sites and existing adjacent developments.

Silica sand

Two alternative approaches were considered at the time of the 'Strategy and Policy Directions' consultation. However, it is now recognised that there is no reasonable alternative to the preferred approach (Policy CSM2), which is to identify and allocate new sites or extensions to existing sites in AONB if this is necessary (in order to meet national landbank requirements) and exceptional circumstances can be proved (and subject to the highest standards of working, restoration and landscaping being implemented). The alternative approach – i.e. allocating only silica sand sites that lie outside the AONB even if this means that no future silica sand sites will be allocated - does not comply with national policy.

Extensions to mineral sites v new sites

Two alternative approaches were considered at the time of the 'Strategy and Policy Directions' consultation. However, it is now recognised that there is no reasonable alternative to the preferred approach which is a mix of new sites and extensions where these may give rise to environmental benefits. The alternative approach of 'preferring extensions' may be seen as a competitive advantage for existing operators, which is not endorsed in national policy.

Strategic site for waste

Various options were considered at the time of the 'Strategy and Policy Directions' consultation. However, it is now recognised that there is no reasonable alternative to the preferred approach which is to allocate Norwood Landfill extension as a strategic site. No other sites are central to the delivery of the plan.

Norwood Landfill extension will help to provide the long term solution that Kent needs to address the vision and objectives requirements to drive waste up the hierarchy. The Waste Site Plan needs to make site allocations for waste to energy facilities, which give rise to air control residues which currently need landfilling at specialist sites.

An alternative approach - which was the preferred approach at the time of the 'Strategy and Policy Directions' consultation - would be to try to treat the flue ash residues so that they can be manufactured into secondary aggregate products. However, through the plan making process it has been established that the technology is currently not viable, and hence there are no realistic alternatives to the disposal of flue ash in landfill for the foreseeable future.

Additional composting and recycling capacity required

Two alternative approaches were considered at the time of the 'Strategy and Policy Directions' consultation: 1) Use high growth forecasts to identify sufficient sites with a view to ensuring flexibility during the plan period; 2) Use low growth forecasts.

The preferred approach has been to use the high growth scenarios for composting and recycling in order to ensure that there will be sufficient flexibility during the plan period. In addition a locational policy gives a steer regarding where waste management facilities are likely to be permitted when waste management operators need to upgrade existing facilities or move to better facilities during the plan period. Appraisal work undertaken has shown that the alternative approach (low growth scenario) has no sustainability merits, and hence an appraisal is not presented at the current time (i.e. in this report).

Recycling/composting capacity for C&I wastes

Two alternative approaches were considered at the time of the 'Strategy and Policy Directions' consultation. However, new evidence now confirms the forecasts which are the most apt and suitable for plan making and the need for recycling/composting is quantified in CSW7. As such, there is no reasonable alternative to the preferred approach.

10 SHARP SAND & GRAVEL AND SOFT SAND: MAKING PROVISION FOR LANDBANKS

10.1 Why have alternatives been considered for this issue?

10.1.1 The need to make provision for 'landbanks'⁶⁴ with a view to ensuring a steady supply of construction aggregates throughout the plan period is recognised in national policy. Whether or not Kent should make provision for separate landbanks for sharp sand and gravel and soft sand has been a difficult issue to resolve for the following reasons:-

- The landbank situation at the end of 2011 is heavily skewed in terms of abundant soft sand reserves and a much smaller amount of sharp sand and gravel;
- Soft sand sites are the predominant type of sand and gravel sites that were promoted through the 'call for sites';
- Reliance on past sales is not a good basis upon which to plan for future provision. Traditional areas of gravel workings in the county are being exhausted or reducing their outputs considerably, such as the Stour Valley and Dungeness; remaining resources are very heavily constrained by international, national and local designations;
- There is a widespread availability of alternatives to sharp sand and gravel in Kent including marine dredged aggregates and secondary/recycled aggregates;
- The CLG Guidance on MASS (October 2012) states that *"where there is a distinct market for a specific type or quality of aggregate such as high specification rock, asphaltting sand, building sand or concreting sand, a separate landbank calculation based on provision to that market **may** be justified for that material or those materials"* (emphasis added);
- On 06 March 2014 DCLG issued new Planning Practice Guidance. There are a number of places in this guidance that elaborate on the types of separate landbanks which should be calculated. Paragraph 085 gives an example of separate land banks being necessary for sand used for concrete (i.e. sharp sand and gravel) and for sand for asphalt (i.e. soft sand). In paragraph 066, when referring to Local Aggregate Assessments (which Mineral Planning Authorities are required to produce annually), the guidance gives examples of carrying out separate assessments for concreting sand (i.e. sharp sand) and for building sand (i.e. soft sand).

10.2 What are the reasonable alternatives?

10.2.1 The following alternatives have been considered:

- 1 To not 'split' the apportionment for sand and gravel.
- 2 To 'split' the apportionment at 40% soft sand and 60% sharp sand and gravel (based on recent sales data).
- 3 To 'split' the apportionment at a different percentage which takes into account the availability of alternative sources (substitutes) for sharp sand and gravel including marine dredged aggregates, imported hard rock and recycled aggregates.

What other alternatives have not been subjected to SA?

10.2.2 An alternative option proposed by an operator was to split the apportionment three ways to reflect the different nature of the three types of materials (sharp sand and gravel, soft sand and Medway Sandstone Gravels). This option is discounted due to the complexity that would arise. Only one Medway Valley sandstone gravel site is operational at the current time.

⁶⁴ Landbanks are stocks of planning permissions.

10.3 Why has the preferred approach been selected?

- 10.3.1 The Council's preferred approach is to provide for separate landbanks. This largely reflects landscape considerations / representations received from the Kent Downs Area of Outstanding Natural Beauty Unit. Splitting the landbank should result in fewer soft sand sites being identified in the Minerals Sites Plan, and hence less potential for an adverse effect upon the setting of the AONB. However, the provision of new sites for soft sand will still be generous given the need to maintain a 7 year rolling land bank for the Plan period.
- 10.3.2 Furthermore, the decision not to split the landbank can be considered pragmatic. Local Aggregate Assessments, which the County Council is required to prepare annually and will be material considerations when determining planning applications, are now required to assess the need for sharp sand separately to that for soft sand; hence, the lack of a rolling 7 year landbank for sharp sand has been identified. This is due to limited permitted reserves and unconstrained potential new resources. A rolling 7-year land-won sharp sand and gravel landbank will not be maintained over the life of the Plan; and shortfalls in the rolling 7-year landbank for this mineral will be addressed through alternative sources of supply such as marine dredged aggregate imports and secondary and recycled materials.
- 10.3.3 The possible downside of the preferred approach relates to deliverability. The mineral site selection process identified a shortage of deliverable sharp sand and gravel sites and a considerable number of suitable soft sand sites. Making separate provision for soft sand and sharp sand and gravel will mean (based on the rolling ten year average sales figures and taking into account the pattern of extant reserves) additional reserve requirements of 3.55mt of soft sand and 19.45mt of sharp sand and gravel. Evidence from the Site Selection process identifies that this combination of materials may not be deliverable. It is also important to recognise that there is decreasing production of sharp sand and there is the capacity within the county to fill this future gap in the market from secondary and recycled aggregates and from Marine Dredged Aggregates.
- 10.3.4 **The preferred approach is broadly in-line with SA findings.** The SA of alternatives (see detailed findings in **Appendix II**) concludes that:

In terms of biodiversity, landscape and water related SA objectives, the appraisal concludes that Option 1 (one joint land bank) may perform least well. There are perhaps the greatest concerns in relation to biodiversity. However, there are considerable uncertainties with this conclusion, and it is not possible to conclude that significant effects are likely. The 'concern' relates to the suggestion that not specifying separate landbanks could mean that there is an undersupply of sharp sand and gravel, particularly later in the plan period, which could lead to pressure for planning permission on sites that are unallocated (i.e. have not been identified subsequent to 'strategic' consideration through a plan). However, there is a counter argument that the ratio of land won sharp sand and gravel to soft sand is likely to change over the plan period as some of the traditional areas of sharp sand and gravel working in the County reduce outputs, and so it would not be helpful to specify separate landbanks. In other words, not specifying separate landbanks will enable flexibility and hence support a gradual shift away from the extraction of sharp sand and gravel. As land won sharp sand and gravel becomes harder to source, so continuing (or increasing) imports of marine dredged aggregates and recycled aggregates will fill the gap.

11 BRICEARTH AND CLAY FOR BRICK AND TILE WORKS

11.1 Why have alternatives been considered for this issue?

11.1.1 The NPPF requires MPAs to maintain landbanks of 'brick clay' (which includes brickearth) of at least 25 years. Brick making as an industry in Kent has declined in recent years. There is now only one operational brickworks remaining in the county, which is Smeed Dean in Sittingbourne, operated by Weinerberger. Ibstock Brick have closed their brickworks at Funton, which is between Lower Halstow and Iwade and moved the production of its yellow Faversham stock bricks to their brickworks in Ashdown in East Sussex. Both Smeed Dean and Ashdown brickworks will need additional supplies of brickearth during the plan period. The 'question' is whether there is a need to supply the brickworks in East Sussex.

11.2 What are the reasonable alternatives?

11.2.1 The following alternatives have been considered:

- 1 A stock of planning permissions will be maintained at each operational and new brickworks and tile works to meet national planning policy. This landbank requirement is to provide for 25 years of production at the individual works.
 - There are no national or regional forecasts or supply level requirements for brick and tile making facilities. Therefore past sales data will be used to inform the calculations for the level of brickearth provision that needs to be made for the plan period.
- 2 Identify and allocate further supplies of brickearth to supply works in Kent or those in neighbouring authorities that are reliant upon brickearth supplies from Kent.
- 3 Identify and allocate further supplies of brickearth if they supply brick-works in Kent.

11.2.2 N.B. Whilst these are the options that were presented in the 'Strategy and Policy Directions' consultation document it is important to note that only (2) and (3) are alternatives, i.e. are mutually exclusive. Option (1) is a suggested approach that could be implemented in combination with (2) or (3). The alternative approach to Option (1) would be to plan *not* on the basis of past sales data, i.e. on some other basis.

11.3 Why has the preferred approach been selected?

11.3.1 The preferred approach – as set out in Policy CSM2 - is to ensure sufficient brickearth sites are identified to enable the continued manufacture of the yellow Faversham Stock bricks at both the Sittingbourne and East Sussex Brickworks. Provision will be made on the basis of past sales data.

11.3.2 **The preferred approach is broadly in-line with SA findings.** From a sustainability perspective, this approach performs well relative to the alternative approach presented, which would involve only identifying reserves of brickearth in Kent if they supply brick making facilities within Kent. Although there is a need to minimise transport distances, the small scale nature of transport in this instance means that this is not a significant consideration. Furthermore, it is fair to assume that transport economics will ensure that brickearth production and usage tends to occur at the nearest point to sources of brickearth supply. Another important consideration is that brick-works should be supported where they produce vernacular bricks that are used to enhance local distinctiveness and built character. There is nothing to suggest that brick-works in East Sussex are less likely to meet this criterion than brickworks in Kent.

11.3.3 SA findings are presented in full in **Appendix III**.

12 PROVISION FOR MUNICIPAL SOLID WASTE

12.1 Why have alternatives been considered for this issue?

12.1.1 Plan-making has required considerable amounts of research into levels of MSW arisings in Kent as well as projected arisings for the plan period. One of the key aims of the plan has been to ensure that net self-sufficiency in all waste streams is maintained throughout the plan period. Hitherto waste projections for MSW in the South East Plan formed a basis for the 'High Growth Rate' scenarios used by Jacobs consultants in their modelling work for KCC. Since the early stages in plan making, data from Kent's own Waste Management Unit including its own forecasts for future arisings has been seen to provide a far more accurate forecast year on year when compared with actual MSW arisings. The Kent data is more 'accurate'; however, there is a need to consider whether it is sensible to plan for a degree of head-room.

12.2 What are the reasonable alternatives?

12.2.1 The following alternatives have been considered:

- 1 Use high growth forecasts to identify sufficient sites with a view to ensuring flexibility during the plan period
- 2 Use low growth forecasts (based upon Kent County Council's own Waste Management Unit's forecasts)

12.3 Why has the preferred approach been selected?

12.3.1 The Council's preferred approach is to use the low growth forecasts as there is confidence that the trends in MSW arisings seen in recent years will continue. In any event, KCC has contracts with waste management companies for relevant ranges of waste arisings, including contingency arrangements should arisings increase. As Kent is well served by facilities for managing MSW, there is no need to plan for additional facilities. The changes required for MSW management during the plan period are expected to facilitate an increase in recycling and to ensure that residual waste can be bulked up for transportation to the Allington Waste to Energy facility.

12.3.2 **The preferred approach is broadly in-line with SA findings.** In theory, there could be some benefit to planning for greater waste management capacity as the risk of capacity being exceeded (and hence waste having to be transported outside of Kent) would be reduced. However, in practice it is recognised that low growth forecasts (based upon Kent County Council's own waste Management Unit's forecasts) are likely to be accurate.

12.3.3 SA findings are presented in full in **Appendix IV**.

13 LANDFILL SPACE FOR KENT'S NON HAZARDOUS WASTES

13.1 Why have alternatives been considered for this issue?

13.1.1 The EU Waste Framework Directive requires waste management to be driven up the waste hierarchy with landfill being considered to be the least desirable option. It was evident during the call for sites that there was a lack of sites for non-hazardous landfill, so there had to be a shift away from reliance on non-hazardous landfill for C&I wastes early in the plan period.

13.2 What are the reasonable alternatives?

13.2.1 The following alternatives have been considered:

- 1 In order to reduce the amount of non-hazardous waste being sent to landfill (462,000 tonnes of C&I waste in 2008), provide site allocations for substantial additional capacity for EfW (and/or other suitable technologies) for Kent's C&I waste;
- 2 In order to make provision for the current C&I waste stream that is being sent to landfill, identify new landfill sites for the amount of waste estimated to be generated for the duration of the plan (albeit recognising that it is difficult to identify a suitable site in Kent, due to geological and environmental considerations).
- 3 No new landfill void space for non-hazardous waste will be identified in Kent for the plan period, but it could be assumed that waste can be sent to the major consented operational landfills for MSW and C&I waste in Thurrock, Havering and South Essex (where the operators are experiencing reducing volumes of waste being sent for landfill and hence it is likely that sufficient void space would be available for Kent's C&I waste).

N.B. Whilst these are the options that were presented in the 'Strategy and Policy Directions' consultation document it is important to note that they are not strictly alternatives, i.e. are not entirely mutually exclusive. It is helpful to consider them as alternatives nonetheless.

13.3 Why has the preferred approach been selected?

13.3.1 The preferred approach, bearing in mind the lack of deliverable non-hazardous sites that came forward in Kent through the 'Call for Sites', is to make provision for new EfW facilities so that there is sufficient EfW capacity to handle the amount of C&I waste that has been sent to landfill in the recent past. Whilst EfW is better than landfill in terms of the waste hierarchy, it is not 'at the top' of the hierarchy. As such, policy is set that requires the production of both heat and power and restricts the capacity of EfW that will be permitted to a maximum of 437,000 tonnes (until such time as annual monitoring shows that the restriction would result in the loss of remaining non-hazardous landfill in the county before the end of the plan period). The 'capping' of EfW will have the effect of ensuring that recycling and composting operations, which are more preferable in terms of the waste hierarchy, are also encouraged. Kent is expected to remain net self-sufficient in managing its own non-hazardous wastes, with no reliance made upon void space or waste management capacity within facilities outside Kent.

13.3.2 **The preferred approach is broadly in-line with SA findings.** The SA concludes that Option 1 performs best on the basis that no new landfill void space for non-hazardous waste will be identified. This is a key consideration from a 'water' perspective. There will be a need to landfill the hazardous flue ashes that result from managing non-hazardous waste and Energy from Waste (EfW) facilities; however, the quantities involved will be relatively small. The alternative approach would involve accepting that there is a need to make provision for a continuation of the current level of C&I waste that is being sent to landfill, and identifying further new sites accordingly. Option 2 would involve seeking to find an appropriate site within Kent; whilst Option 3 would accept that a more suitable site could be found in Essex. Option 3 would probably be preferable on the basis of the proximity of the two Counties (i.e. given that the Thames Gateway straddles the Counties).

13.3.3 SA findings are presented in full in **Appendix V**.

PART 3: WHAT ARE THE APPRAISAL FINDINGS AND RECOMMENDATIONS AT THIS CURRENT STAGE?

14 INTRODUCTION (TO PART 3)

The report must include...

- The likely significant effects on the environment associated with the draft plan approach
- The measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects of implementing the draft plan approach

14.1.1 The aim of Part 3 is to present appraisal findings and recommendations in relation to the current draft plan approach, i.e. the approach presented within the ‘Submission’ Plan document.

15 APPRAISAL OF THE DRAFT (‘SUBMISSION’ VERSION) PLAN

15.1 Methodology

15.1.1 The appraisal is structured under ‘nine sustainability topic’ headings. Under each topic a number of sustainability objectives (as identified through scoping) are listed. Taken together, the sustainability topics and objectives provide a methodological ‘framework’ for the appraisal of likely significant effects on the baseline.

15.1.2 Within each sustainability topic chapter there is an appraisal of: 1) the preferred approach to minerals; and 2) the preferred approach to waste. For both (1) and (2) ‘significant effects’ on the baseline / likely future baseline are identified and evaluated. Where possible, significant effects associated with ‘the plan as a whole’ are also identified/evaluated.

15.1.3 Every effort is made to predict effects accurately; however, this is inherently challenging given the high level nature of the plan. The ability to predict effects accurately is also limited by understanding of the baseline. Because of the uncertainties involved, there is a need to exercise caution when identifying and evaluating significant effects and ensure all assumptions are explained in full.⁶⁵ In many instances it is not possible to predict significant effects, but it is possible to comment on merits (or otherwise) in more general terms.

15.1.4 It is important to note that effects are predicted and evaluated taking into account the criteria presented within Schedule 1 of the Regs.⁶⁶ So, for example, account is taken of the probability, duration, frequency and reversibility of effects. Cumulative effects are also considered. These effect ‘characteristics’ are described within the appraisal as appropriate.

Added structure

15.1.5 To give the appraisal added structure, each policy within the plan is assigned one of the following symbols in order to indicate ‘broad implications’. It is important to note that these symbols are not used to indicate significant effects.

- | | |
|-------------------------|-------------------------|
| ↗ Positive implications | ↘ Negative implications |
| ↔ No implications | ? Unclear implications |

References to the influence of past appraisal findings

15.1.6 A series of ‘boxes’ are embedded within the appraisal text below to explain the influence (or otherwise) of recommendations made in relation to working draft versions of the plan. See further discussion of the influence of SA ‘up to this point’ in Part 2, above.

⁶⁵ Government Guidance (The Plan Making Manual) states (in relation to SA) that... *“Ultimately, the significance of an effect is a matter of judgment and should require no more than a clear and reasonable justification.”*

⁶⁶ Environmental Assessment of Plans and Programmes Regulations 2004

15.2 Biodiversity

Relevant sustainability objectives

- 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

Appraisal of the preferred approach to minerals

Policy	CSM1	CSM2	CSM3	CSM4	CSM5	CSM6	CSM7	CSM8	CSM9	CSM10	CSM11	CSM12
Broad Implications	↔	?	?	↔	↔	↔	↔	↔	↔	↔	↔	↔

- 15.2.1 Policy **CSM2** - *Supply of Land-won Minerals in Kent* – will have a bearing on where extraction occurs within Kent, which in turn could have implications for biodiversity.
- 15.2.2 In terms of **sand and gravel**, the preferred approach is now to make provision for allocating (in the Minerals Sites Plan) sufficient sand and gravel sites using the past 10 year sales data as an indicator (1.6mtpa). A higher level of provision had previously been considered. The Kent Wildlife Trust has previously stated that it supports the allocation of enough sand and gravel resources to cover the whole of the plan period as this would allow for strategic consideration of the impacts on biodiversity of quarrying within specific localities / avoidance of ad-hoc decisions being made to individual applications that may not be in conformity with the overall biodiversity aims for the area.
- 15.2.3 The sand and gravel site allocations in the Mineral Sites Plan will contain land-won sharp sand and gravel sites, soft sand (building sand) sites and sandstone gravel sites, to reflect the different types of geological formations in Kent which are used as construction aggregates. Separate landbanks are made for soft sand and sharp sand/gravel, which is an important point given that sharp sand and gravel is associated with the Stour Valley and Dungeness areas (both sensitive from a biodiversity perspective). It will be important to ensure that the policy approach enables a gradual shift away from the extraction of land-won sharp sand and gravel / a shift towards alternative sources of marine dredged sand and gravel and recycled aggregates from sources in Kent.
- 15.2.4 There is also the issue of **silica sand** extraction within the Kent Downs AONB - see discussion under Landscape.
- 15.2.5 Policy **CSM3** - *Strategic Site for Minerals* – allocates the Medway Cement Works, Holborough. This site is located in a relatively sensitive area, adjacent to the North Downs Woodland SAC. Potential impacts to the SAC are the focus of a separate process of Habitats Regulations Assessment (HRA).

At a previous SA stage (2013) it was recommended that *“Policy could be used to identify issues that should be a focus of the site’s restoration plan. In particular, policy could identify particular habitat types that should be instated.”*

This recommendation has been partially accepted. As the developer has a valid existing permission which they could operate under, any new application which they might submit will always need to be compared with the fall back position which is the existing consent. Therefore, the Minerals Planning Authority does not have much of a negotiating position, i.e. has limited potential to start bringing in new issues. However, a new application could be significantly different (in terms of layout, design and technologies), and as such KCC deem it is appropriate to include some criteria against which any new application may be judged. In particular, it is appropriate to include criteria focused on avoiding landscape character and traffic impacts. It is not deemed appropriate to make specific reference to biodiversity considerations.

15.2.6 Policy **CSW9** - *Prospecting for Carboniferous Limestone* – sets criteria to guide decisions on when and where planning permission will be granted for the drilling operations associated with the prospecting for underground limestone resources in East Kent. Kent Wildlife Trust have highlighted that underground limestone exploration within East Kent may damage important areas of calcareous grassland. However, it is not clear that a significant effect is likely, particularly given the stringency of the criteria set by the policy.

Appraisal of the preferred approach to waste management

Policy	CSW1	CSW2	CSW3	CSW4	CSW5	CSW6	CSW7	CSW8	CSW9	CSW10	CSW11	CSW12	CSW13	CSW14	CSW15	CSW16	CSW17	CSW18	CSW19
Broad Implications	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	?	↗	↔	↔	↗	↔

15.2.7 Policy **CSW14** - *Remediation of brownfield land* – sets criteria to guide decisions on when and where permission will be granted for waste developments on brownfield land which facilitate its redevelopment by reducing or removing contamination. Brownfield sites where certain conditions occur are known to be very valuable for wildlife providing refuges within the urban environment and habitats for rare invertebrates. Brownfield sites are particularly important for their suite of invertebrate species within the Thames Gateway. As such, Kent Wildlife Trust have highlighted the importance of this policy specifically securing the remediation of brownfield sites without harm to the ecological value of the site. It is not clear that a significant effect is likely given that criteria establish that: A) development must avoid causing unacceptable harm to the environment; and B) the site is identified in a Local Plan for redevelopment or has planning permission for redevelopment.

15.2.8 Policy **CSW15** - *Disposal of dredgings* – establishes that a site for the disposal of dredgings will be identified in the Waste Sites Plan assuming that one can be found that meets certain criteria. This Policy now requires that any application must specifically demonstrate that *‘there are no opportunities to use the material to enhance the biodiversity of the Kent estuaries’*. This is in line with wishes of the RSPB, who have highlighted that many of their reserves have been created by land raising and restoration to create the correct topography for habitat creation, including Dungeness and Cliffe Pools (both in Kent), and that availability of dredgings is a limiting factor in restoration to biodiversity.

15.2.9 Policy **CSW18** - *Nuclear Waste Treatment and Storage at Dungeness* – sets criteria to guide applications for facilities for the storage and/or management of radioactive waste within the Nuclear Licensed area at Dungeness. Kent Wildlife Trust have stated concern that there is no allusion to protection of the Natura 2000 and Ramsar sites that may be impacted. However, it is not clear that a significant effect is likely given the criteria set by the policy, including the criteria that development will only be permitted where *‘the outcome of environmental assessments justify it being managed on site’*.

Appraisal of the preferred approach to DM policy

Policy	DM1	DM2	DM3	DM4	DM5	DM6	DM7	DM8	DM9	DM10	DM11	DM12	DM13	DM14	DM15	DM16	DM17	DM18	DM19	DM20	DM21	DM22	DM23
Broad Implications	↗	↗	↗	↗	↔	↔	↔	↔	↗	↔	↗	↔	↔	↔	↔	↗	↔	↗	↗	↔	↔	↔	↔

15.2.10 Policy **DM1** – *Sustainable design* – refers to take appropriate measures to protect and enhance the biodiversity interests of sites.

15.2.11 Policy **DM2** - *Environmental and Landscape Sites of international, national and local importance* - will play an important role in ensuring that proposals for minerals and waste do not come forward in areas where there could be significant impacts. The policy also includes useful text to ensure the value of ‘sites of local importance’ is recognised. In particular the policy refers to *‘land that is of regional or local importance as a wildlife corridor’*.

At a previous SA stage (2011) it was recommended that biodiversity focused development management policy might make reference to the importance of ensuring ‘*no net loss in ecosystem services provided or benefits experienced locally*’.⁶⁷

This recommendation has not been accepted on the basis that the evidence-base is not easily available to evaluate the ‘services’ provided by and ‘benefits’ derived from habitats / sites. It is noted that Policy DM3 requires proposals to ensure that they result in no significant impact on Kent’s important biodiversity assets. Furthermore Policy DM9 requires all minerals and waste proposals to include measures to ensure the achievement of both ‘no deterioration’ and improved ecological status in relation to the water environment.

- 15.2.12 Policy **DM3** – *Ecological Impact Assessment* – was added to the plan in 2013 subsequent to discussion with interest groups. It will ensure that a systematic approach is taken to ensuring that development does not erode the biodiversity baseline (and enhances it where possible).
- 15.2.13 Policy **DM4** – *Green Belt* – highlights that ‘retaining and enhancing biodiversity’ will be a factor in determining whether development in the Green Belt is appropriate.
- 15.2.14 Policy **DM16** - *Planning obligations* - identifies matters that may need to be covered by planning obligations to ensure suitable control over and to mitigate and/or compensate for the effects of minerals and waste development. Importantly, it lists ‘environmental enhancement and the delivery of Local Biodiversity Action Plan Targets’ and ‘long term management of mitigation or compensation sites’. The latter is a particularly ambitious approach as it could lead to financial contributions being directed to offsite enhancement projects that contribute to the maintenance of ecological networks at the landscape scale.
- 15.2.15 Along with DM16, Policy **DM18** - *Restoration and Aftercare* – is of central importance to the achievement of the plan objective to ‘restore minerals sites to the highest possible standard and incorporate opportunities for biodiversity to meet targets outlined in the Kent Biodiversity Action Plan’ and the vision of ‘integrating habitat creation within wider habitat networks’. It is particularly notable that the Policy encourages a consideration of ‘landscape and biodiversity opportunities and constraints ensuring connectivity with surrounding habitats’. The outcome should be a positive effect in the long-term, particularly with regards to ensuring a ‘network’ of habitat patches (including wetland and woodland) in Kent. A coherent network is important in terms of enabling species populations to shift their range in response to environmental change, e.g. climate change. The Woodland Trust have stated their support for this policy, highlighting that ‘*opportunities should be taken to plant Native Woodland to the benefit of the local and wider community as well as contributing to the UK’s climate change targets*’.
- 15.2.16 Policy **DM19** - *After-use* – identifies priorities for the after-use of minerals and temporary waste management sites. The policy references biodiversity interests.

At a previous SA stage (2013) it was recommended that:

“Unless an exceptional need to expand adjacent recreation or employment development can be demonstrated, [the after use policy] should indicate that the restoration of sites to meet biodiversity priorities is the overriding restoration ambition for all mineral sites. N.B. This recommendation reflects the view of the Kent Wildlife Trust, as stated through consultation. Their view is that: ‘the restoration of mineral sites represents one of the very few opportunities to achieve targets for an increase in BAP habitats.’”

This recommendation has not been accepted on the basis that restoration of mineral sites to other end uses is also important, especially agricultural restoration, given the landscapes and settings of most of the mineral sites in the County and the fact that some mineral workings in Kent occur where the agricultural quality is of the highest value (i.e. brickearth). Other forms of restoration, eg forestry and amenity uses, can also be important given local circumstances. Restoration of sites to assist in meeting biodiversity priorities should be *one of the overriding ambitions for mineral sites*.

⁶⁷ Ecosystem services provided by sites might involve various ‘regulating services’ (e.g. the regulation of flood risk) or ‘cultural services’ (e.g. services relating to recreational enjoyment and contribution to local distinctiveness).

Summary

- 15.2.17 Whilst minerals extraction clearly has the potential to impact negatively on biodiversity, the likely effects of the MWLP are inherently uncertain given that the plan will primarily 'make provision' as opposed to allocating sites (which will be the aim of the Minerals Sites Plan).
- 15.2.18 The Plan makes a separate provision for sharp sand and gravel (a mineral resource that is often located in sensitive environments), as required by government policy and guidance. Any pressure to bring forward non-allocated sites as a consequence of shortfalls in the landbank for this mineral would be addressed at the time any applications are submitted. Mineral need arguments based on landbanks would not be the only material consideration in determining such applications
- 15.2.19 It is noted that a plan objective is to 'Restore minerals sites to the highest possible standard 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.' and that policies are in place that will help to ensure that this objective is achieved. Policy is in place to ensure that negative effects are minimised and opportunities (in particular in terms of contributing to ecological networks / connectivity at landscape scales) are realised. It is also clear that Development Management Policy will ensure that biodiversity is a primary consideration when determining operational arrangements and when preparing restoration/aftercare plans. On a minor note, it might be more appropriate to refer generically to 'landscape-scale biodiversity initiatives', rather than specifically to Biodiversity Opportunity Areas.
- 15.2.20 Overall, in the long term, it is expected that the MWLP will lead to a **significant positive effect** for biodiversity in Kent. The minerals industry is uniquely placed to help halt and reverse the ongoing decline in biodiversity, and the plan is set to help ensure that opportunities are realised.

15.3 Climate change mitigation

Relevant sustainability objectives

- Address the causes of climate change through reducing emissions of greenhouse gases through energy efficiency and energy generated from renewable sources

Appraisal of the preferred approach to minerals

Policy	CSM1	CSM2	CSM3	CSM4	CSM5	CSM6	CSM7	CSM8	CSM9	CSM10	CSM11	CSM12
Broad Implications	↔	?	↔	↔	↔	↔	↔	↘	↔	↗	↗	↔

15.3.1 It is notable that there is no minerals policy dedicated to climate change mitigation. However, this is understandable given that ‘key’ to contributing towards climate change mitigation through minerals planning will be the encouragement of sustainable patterns of transport which is addressed through policies **CSM10 / CSM11** and **DM10** (and discussed further below under the ‘transport’ heading). Policy **CSM2** - *Supply of Land-won Minerals in Kent* – also has a bearing on sustainable transport, and this is also discussed further below.

15.3.2 Policy **CSM8** - *Oil, Gas and Coal-bed Methane* - promotes the exploration, appraisal and development of oil, gas (including shale gas), coal-bed methane, abandoned mine methane development and underground coal seam gasification. Criteria are included to ensure that such operations only come forward where ‘all environmental impacts [are] mitigated to ensure that there is not an unacceptable effect upon the local environment’. However, in practice decisions are unlikely to take into account the inevitable climate change implications that cannot be effectively mitigated at the project scale. This is an issue that has been raised by numerous consultees, including Friends of the Earth and the Kent Green Party. The former suggest that: “The Plan must consider climate change in more depth, and in particular in relation to developments that will have serious climate change emissions impacts... it is essential that the final Minerals Plan covers the cumulative impact on climate change emissions, and therefore the limits to onshore oil and gas development, as well as a clear application of the precautionary principle.” The latter suggest that: “Like France and Germany, KCC should declare that [unconventional hydrocarbons] will not be pursued within the county borders.” In practice, it is understood that there is little or no potential for the MWLP to depart from national policy with respect to unconventional hydrocarbons. It is national planning policy for MPA to plan for energy minerals in their areas where deposits are potentially economic. KCC has an obligation to plan for onshore oil and gas development including unconventional hydrocarbons, distinguishing between the phases of exploration, appraisal and production.

At a previous SA stage (2013) it was recommended that: “Within [the Oil, coal bed methane and gas policy] refer to the importance of avoiding unacceptable effects upon ‘the local environment’ (rather than ‘the environment’).”
 This recommendation has been accepted; and the recommended policy wording is now used.

Appraisal of the preferred approach to waste management

Policy	CSW1	CSW2	CSW3	CSW4	CSW5	CSW6	CSW7	CSW8	CSW9	CSW10	CSW11	CSW12	CSW13	CSW14	CSW15	CSW16	CSW17	CSW18	CSW19
Broad Implications	↔	↗	↔	↗	↗	↗	↗	↗	↗	↗	↗	↔	↔	↔	↔	↔	↔	↔	↔

15.3.3 It is notable that there is no minerals policy dedicated to climate change mitigation. However, this is understandable given that ‘key’ to contributing towards climate change mitigation through waste management planning will be:

- A) ‘Driving waste management up the waste hierarchy’ in such a way that minimises the emissions from the whole life of materials and products, and
- B) Ensuring that waste is managed in close proximity to source in-line with the ‘proximity principle’.

15.3.4 **Policy CSW2 – Waste Hierarchy** – is focused on ensuring that the waste management is increasingly managed ‘up the waste hierarchy’.

At a previous SA stage (2011) it was recommended that – *“Further wording could be added to this policy to explain that there can be cause to depart from the hierarchy for specific waste streams in order to deliver the best environmental outcome, and that doing so must be justified by ‘life-cycle thinking’ (i.e. full consideration of the overall impact of generating and managing these waste streams). In particular, there could be a need to clarify how anaerobic digestion of food and garden waste fits into the waste hierarchy.*

This recommendations has been accepted, with supporting text improved by the inclusion of the following:
“The MWLP has to plan for all forms of waste management in the waste hierarchy to make this possible. Whilst it is anticipated that there will be a transition over time to forms of waste management at the higher end of the waste hierarchy, there will still be a need for disposal at the end of the plan period for difficult to treat wastes, or wastes such as asbestos for which there is no present alternative. The MWLP addresses this transition by seeking to rapidly provide a more sustainable option for the mixed non-hazardous waste that is going to landfill by allocating sites for energy recovery. Due to ‘other recovery’ being at the lower end of the waste hierarchy, the total amount of new energy recovery capacity to be permitted will be capped. It is envisaged that this method of waste management will become displaced as recycling and waste processing become more economically viable.”

15.3.5 **CSW3** is entitled “Waste Reduction”, but is focused on the specific issue of waste accruing from building activities. This reflects the fact that the MWLP can only control development. Waste minimisation is out of its control. Policy CSW3 has been drafted to ensure that waste minimisation occurs in the building of new developments, and will help to ensure that buildings are designed to enable materials to be recycled or sent for composting.

15.3.6 Policy **CSW4 - Strategy for Waste Management Capacity** – identifies that the strategy to provide sufficient waste management capacity to manage at least the equivalent of the waste arising in Kent plus a declining amount of waste from London. The implications of this in terms of abiding to the ‘proximity principle’ / minimising the need to transport waste are discussed below under the ‘transport’ heading.

15.3.7 Policy **CSW6 - Location of Non-strategic Waste Sites** - sets out a number of locational criteria that must be met if waste management facilities are to be granted planning permission. It is notable that the criteria establish that development will be appropriate on greenfield sites if the nature of the waste management requires an isolated location. This is an important point in terms of supporting composting, which is generally thought of as a form of ‘recycling’. More generally, this policy is part of a package of measures that seeks to stimulate market demand for the development of recycling and processing facilities. In the short term, demand may be suppressed as waste management operators take time to fully realise the implications of the effect of the Landfill Tax for their existing operations. But in the long term, demand should

increase. No cap has been placed upon the total capacity required for recycling and processing facilities, and it is therefore necessary for Policy CSW6 to clarify the parts of Kent that might be developed for waste management.

15.3.8 Policies **CSW8** (*Waste Management for Non-hazardous Waste*), **CSW9** (*Energy from waste facilities for Non-hazardous Waste*) and **CSW10** (*Non-hazardous waste landfill in Kent*) are central to the strategy to ensure that waste is managed ‘up the waste hierarchy’. Support is provided to Energy from Waste (EfW) facilities despite EfW not being ‘at the top’ of the waste hierarchy. This policy support for EfW reflects the urgent need to make provision for new capacity to enable a step change in C&I waste management practices, with a major reduction in reliance on landfill for this waste stream. Importantly, policy is set that 1) requires EfW facilities to produce both heat and power; and 2) restricts the capacity of EfW that will be permitted to a maximum of 437,000 tonnes (until such time as annual monitoring shows that the restriction would result in the loss of remaining non-hazardous landfill in the county before the end of the plan period). The ‘capping’ of EfW will have the effect of ensuring that recycling and composting operations, which are more preferable in terms of the waste hierarchy, are also encouraged. The cap on new capacity is also useful as the calculations will include smaller facilities and alternative technology if developed and this can then be used to restrict the larger scale EfW plants which are likely to be mass burn technology. The policy approach is probably appropriate. There is no shortage of land for alternative facilities (mostly Anaerobic Digestion and dirty MRFs⁶⁸) given that such facilities will tend to require relatively small sites (30 to 50,000 tonnes per annum capacity). EfW facilities need about 90,000 tpa capacity to be viable as ‘merchant facilities’, and so require larger sites (which are fewer and, unless allocated, are at risk of being lost to piecemeal development for industrial and commercial uses).

15.3.9 Policy **CSW11** – *Development at Closed landfill sites* – is also of note given that closed landfill sites containing biodegradable material can result in significant on-going release of methane (a potent greenhouse gas) to the atmosphere and also leachate to soils and groundwater. This criteria-based policy should have the effect of encouraging development that is able to address these issues. Some of the site will have the potential to deliver energy recovery options including gas to run electrical generators or to produce heat that can be piped locally. Each site will present its own unique set of challenges. In Kent, historically many sites were constructed on the principal of dilute and disperse (i.e. No liner) which brings its own set of issues.

Appraisal of the preferred approach to DM policy

Policy	DM1	DM2	DM3	DM4	DM5	DM6	DM7	DM8	DM9	DM10	DM11	DM12	DM13	DM14	DM15	DM16	DM17	DM18	DM19	DM20	DM21	DM22	DM23
Broad Implications	↗	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↗	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔

15.3.10 Policy **DM1** - *Sustainable Design* - is an important policy from a climate change mitigation perspective. It will be a key ‘hook’ used by planning officers to ensure that proposals coming forward perform well in terms of sustainability objectives relating to climate change mitigation and efficient use of natural resources.

At a previous SA stage (2011) it was recommended that Policy DM1 should make reference to ‘*minimising*’ rather than ‘*reducing*’ greenhouse gas emissions.

This recommendation has been accepted, with the policy text now referring to the need to: “*minimise greenhouse gas emissions and other forms of emissions; minimise levels of energy and water consumption and incorporate measures for renewable energy technology and design in new facilities; minimise production of waste during construction and operation; and maximise the re-use or recycling of materials.*”

⁶⁸ A dirty MRF accepts a mixed solid waste stream and then proceeds to separate out designated recyclable materials through a combination of manual and mechanical sorting. The sorted recyclable materials may undergo further processing required to meet technical specifications established by end-markets while the balance of the mixed waste stream is sent to a disposal facility.

15.3.11 The implications of Policy **DM12 - Transportation of Minerals and Waste** – are considered further below.

Summary

15.3.12 A key consideration relates to the need to ‘drive waste management up the waste hierarchy’ so that waste is increasingly seen as a resource and there is reduced need for energy and resources to be used to develop new materials.

15.3.13 Support is provided to Energy from Waste (EfW) facilities despite EfW not being ‘at the top’ of the waste hierarchy. This policy support for EfW reflects the urgent need to make provision for new capacity to enable a step change in C&I waste management practices, with a major reduction in reliance on landfill for this waste stream. Importantly, policy is set that 1) requires EfW facilities to produce both heat and power; and 2) restricts the capacity of EfW that will be permitted to a maximum of 437,000 tonnes (until such time as annual monitoring shows that the restriction would result in the loss of remaining non-hazardous landfill in the county before the end of the plan period). The ‘capping’ of EfW will have the effect of ensuring that recycling and composting operations, which are more preferable in terms of the waste hierarchy, are encouraged. Currently it is the case that major recycling capacity is not coming forward quickly enough (to fill the gap in C&I waste management capacity). In the longer term, when recycling becomes more competitive it will supersede EfW. The cap on new capacity is also useful as the calculations will include smaller facilities and alternative technology if developed and this can then be used to restrict the larger scale EfW plants which are likely to be mass burn technology.

15.3.14 In conclusion, the plan will enable waste management facilities which are higher up the waste hierarchy than at present and, as such, represents **a step in the right direction** in terms of climate change mitigation; however, it is not possible to conclude that the positive effect will be ‘significant’.

15.3.15 Other important considerations are as follows –

- Policy CSM8 establishes a policy framework for the exploration, appraisal and development of energy minerals, including unconventional hydrocarbons (e.g. shale gas). Environmental organisations have raised concerns; however, there is little or no potential for the MWLP to not take this approach. Any amendment to the Plan which tries to prevent the extraction of hydrocarbons would not be found sound at the Examination in public, given that it is national policy that the production of hydrocarbons in the UK should be expanded to reduce the demand on imported fuels. Policy CSM8 provides a framework for determining any applications that may be submitted to the County Council for energy mineral development during the plan period, and any such application will also be assessed against the Development Management policies. Environmental impacts, including cumulative impacts (DM11), will be assessed; however, in practice there is unlikely to be the potential to take into account cumulative impacts on the climate.
- There is, of course, also a need to minimise carbon emissions associated with the transportation of minerals and waste. This is an issue that is considered further below, under the ‘transport’ heading.

15.4 Community and well-being

Relevant sustainability objectives

- Support efforts to create and sustain sustainable communities, particularly the improvement of health and well-being
- Support the delivery of housing targets

Appraisal of the preferred approach to minerals

Policy	CSM1	CSM2	CSM3	CSM4	CSM5	CSM6	CSM7	CSM8	CSM9	CSM10	CSM11	CSM12
Broad Implications	↔	↔	↔	↔	?	↔	↔	↘	↔	↗	?	↔

- 15.4.1 Minerals development can clearly have negative implications for nearby communities and hence the location of these sites is of great importance, as is the policy approach that is established to guide development. The location of minerals sites in relation to sensitive community receptors will primarily be determined through the Mineral Sites Plan. Policy **CSM4 - Non-identified Land-won Mineral Sites** – states that exception sites (i.e. sites other than those allocated through a Plan) will only be permitted if they can demonstrate that there are overriding benefits which justify extraction at the exception site and that they meet the requirements of relevant development management policies.
- 15.4.2 The transport of minerals by heavy good vehicle can also have negative implications for communities and general well-being. Policy **CSM10 - Sustainable Transport of Minerals** - promotes new wharf and railhead importation operations (in order to encourage minerals entering the County by sea and rail, rather than by road) so long as they are well located in relation to the Key Arterial Routes.
- 15.4.3 Another consideration is the potential for minerals policy to ‘sterilise’ land that might otherwise be used for housing development. Some concerns have been raised through consultation, particularly in relation to Policy **CSM5 - Land-won Mineral Safeguarding**. In particular, one consultee, representing the development industry, has suggested that “KCC’s *blanket approach to safeguarding will inevitably prejudice the delivery of much needed housing development, particularly on the edge of existing urban areas; increase the cost of developing and increase the cost of development itself.*” The approach is considered a ‘blanket approach’ on the basis that no consideration is taken of the viability of reserves (rather, the onus is on an applicant to disprove the viability of a mineral reserve within a safeguarding area), and there is no consideration given to the potential for land to be used for alternative uses, particularly housing at edge of settlement locations. KCC has responded to these concerns, highlighting that: “*Mineral resources occur geologically over a wide area but may well vary in their quality and this is an unknown. Therefore safeguarding has to reflect this factor. We are not just safeguarding viable reserves. We are we are safeguarding for future generations and definition of viability will change over time... The mineral safeguarding policy is not disproportionate... The District Council will determine applications and will balance the merits on each case...*” KCC also point out that monitoring of permitted reserves (i.e. ‘the land bank’) will be undertaken, which will inform the determination of applications within MSAs.
- 15.4.4 Similar issues have been raised in relation to Policy **CSM11 - Safeguarded Wharves and Rail Depots**. In particular, HCA has raised concerns about the safeguarding of Red Lion Wharf, Gravesend. The HCA supports alternative, regeneration focused uses. The response of KCC is that: “*...Policy CSM11 identifies Red Lion Wharf as it is an operational and modern facility in Kent that needs to be safeguarded. This does not preclude investigations elsewhere in Kent for alternative wharf capacity...*” It is noted that a recent change to Policy CSM11 seeks to avoid conflicts of interest over land use at wharves and railheads: “[S]ites are safeguarded for as long as they are not demonstrably obsolete in their freight handling use.”

15.4.5 Policy **CSM8** relates to exploration, appraisal and development of oil, gas (including shale gas and natural gas), coal bed methane, abandoned mine methane, underground coal seam gasification, and shale gas schemes. Concerns have been raised about the potential adverse effects of developments for gasification and hydraulic fracturing (fracking) on public safety and health, and on the surrounding environment. Consultees have suggested that a more detailed, criteria-based policy should be prepared. Shepway District Council have suggested that “an opportunity may have been missed in the supporting text to allay some of the public’s fears over matters such as “fracking” techniques.” In response, KCC state that: “*Policy CSM8 provides the overarching framework only with regard to conventional and unconventional hydrocarbons. It presumes to permit proposals for the exploration, appraisal and development of these resources in line with national planning requirements, subject to the criteria of acceptability in broad terms. The form of technology employed during these phases is not a matter for the policy. Any such application will be assessed against the Development Management policies.*” Elsewhere, KCC highlight that there is no evidence-base upon which to substantiate a detailed, criteria-based policy. At this stage in the development of unconventional hydrocarbons in Kent, there is no detailed knowledge of the resources and the issues that might surround extraction.

Appraisal of the preferred approach to waste management

Policy	CSW1	CSW2	CSW3	CSW4	CSW5	CSW6	CSW7	CSW8	CSW9	CSW10	CSW11	CSW12	CSW13	CSW14	CSW15	CSW16	CSW17	CSW18	CSW19
Broad Implications	↔	↔	↔	↔	↔	↗	↔	?	↗	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔

15.4.6 As discussed above under the ‘climate change mitigation’ heading, the preferred strategy is to support management of waste at Energy from Waste (EfW) facilities in-line with market demand. This does have some implications for health and well-being given that incineration which emits air borne pollutants and yields hazardous flue ash. Composting is an alternative waste management solution that also brings with it implications for health and well-being, but probably of lesser significance.

15.4.7 It is also important to consider that the calculation of new waste management capacity (**CSW4**) has been based upon growth in waste production. It is important to work to a worst case scenario in order to ensure sufficient supply of land for waste management facilities; however, the downside of this policy is that if waste does not grow as quickly or declines then the effect might be the unnecessary sterilisation of land that could otherwise be used for housing. Monitoring will be important, and there will be the potential to review the MWLP if necessary.

15.4.8 Policy **CSW5** - *Strategic Site for Waste* – allocates a site for the continued disposal of hazardous flue ash from the Allington EfW Plant, guaranteeing capacity for disposal beyond 2016. Whilst it is accepted there are potentially other processes and technologies which might be capable of dealing with this material this is not something currently available on a sufficiently large scale as to be viable. It has been suggested that this site need not be allocated on the basis that void space for hazardous waste disposal will become available as a result of the extraction of clay for engineering and sea defence work during the plan period, but it is recognised that certainty is of imperative importance.

15.4.9 Policy **CSW6** - *Location of Non-strategic Waste Sites* – seeks to ensure that waste sites only come forward in locations where there will be ‘no unacceptable adverse impact to sensitive receptors’.

15.4.10 Policy **CSW9** - *Energy from Waste Facilities for Non-hazardous Waste* – identifies that ‘EfW facilities which exceed an annual design capacity for 150,000 tonnes per year of waste will be permitted subject to the applicant (or landowner) entering into an agreement to contribute to a Kent Community Fund or make other contributions in kind to the local community in which the facility is to be situated.’ This is an important policy stipulation given that EfW facilities can be

associated with localised air quality impacts. The supporting text states that *'It is recognised that it may be possible for contributions made to district authorities by way of the Community Infrastructure Levy (CIL) to satisfy the requirement of this policy'*. Dover District Council (albeit in 2011, at the time of the Strategy and Policy Directions consultation) suggested that *'S106 would... be the better method of obtaining funding for a community fund.'*

Appraisal of the preferred approach to DM policy

Policy	DM1	DM2	DM3	DM4	DM5	DM6	DM7	DM8	DM9	DM10	DM11	DM12	DM13	DM14	DM15	DM16	DM17	DM18	DM19	DM20	DM21	DM22	DM23
Broad Implications	↗	↔	↔	↗	↔	↔	↔	↔	↔	↗	↗	↗	↗	↔	↔	↗	↔	↗	↗	↗	↔	↔	↔

- 15.4.11 Policy **DM1** - *Sustainable Design* – encourages appropriate measures to ensure that the proposal does not cause unacceptable harm to communities.
- 15.4.12 Policy **DM4** - *Green Belt* – establishes that minerals and waste development in the Green Belt must be able to demonstrate that there will be community benefits as a result (where it is assumed that improving damaged and derelict land will benefit communities).
- 15.4.13 Policy **DM10** - *Health and Amenity* – states that *"Minerals and waste development will be permitted if it can be demonstrated that they are unlikely to generate unacceptable adverse impacts from noise, dust, vibration, odour, emissions, bioaerosols, illumination, visual intrusion, traffic or exposure to health risks and associated damage to the qualities of life and wellbeing to communities and the environment."* Given the difficulty in accurately forecasting such effects, it is thought that this wording is appropriate and should help to ensure health and amenity is adequately protected.
- 15.4.14 Policy **DM11** - *Cumulative Impact* – could have important implications for communities.
- 15.4.15 Policy **DM12** - *Transportation of Minerals and Waste* – will have important implications for communities.
- 15.4.16 Policy **DM13** - *Public Rights of Way* - seeks to ensure that, where necessary, diversions to public rights of way are both 'convenient and safe'.

At a previous SA stage (2011) it was recommended that: *"the term 'convenient' may need further definition. It might be appropriate to require that the 'function' of public rights of way is maintained and that diversions can continue to be conveniently utilised by key user groups."*
 This recommendation has not been accepted on the basis that the evidence-base is not available to define 'convenience', function or key user groups.

- 15.4.17 Policy **DM16** - *Planning Obligations* - identifies some strategic priority areas where planning obligations might be applied, recognising that minerals and waste development can result in negative impacts to local communities and the local environment. The list of issues is thought to be comprehensive. The suggestion that 'an appropriate matter to be covered by such planning obligations' could include 'codes of construction practice' that ensure local recruitment and 'opportunities for modern apprenticeships' is thought to be particularly beneficial, in that it is likely to be a well-targeted approach to enhancement of the local 'community' baseline.
- 15.4.18 Policy **DM18** - *Restoration and Aftercare* –should help to ensure that minerals extraction leads to benefits to local communities in the long-term.

At a previous SA stage (2011) it was recommended that the policy should “*require that restoration and after-care plans consider community needs and aspirations, perhaps requiring that local interest groups are sought out and engaged.*”

It was also recommended that the policy should *include “a requirement for restoration and after-care plans to be updated periodically.”*

These recommendations have been accepted, with the supporting text now beginning with the statement that “*Restoration and Aftercare plans should take into consideration community needs and aspirations. Local interest groups and community representatives should be sought out and their viewpoints incorporated into the proposals wherever possible and appropriate. Restoration and aftercare plans for mineral development need to be reviewed and updated periodically, in accordance with legislation.*”

Another SA recommendation (made within the initial SA commentary document, prior to the 2011 consultation document being finalised) was that reference should be made to ‘landscape and biodiversity opportunities and constraints’. This recommendation was also accepted.

15.4.19 Policy **DM20 - Aggregate Recycling** – specifies that new aggregate recycling processing plant will be permitted when processing is contained within covered buildings (or when can be demonstrated that there would be no significant adverse impacts from dust and/or noise upon communities or the environment). This policy approach reflects an understanding of an existing issue, i.e. the fact that existing facilities can be a local nuisance.

Summary

15.4.20 Minerals and waste development clearly has the potential to impact negatively in terms of ‘communities and well-being’; however, the likely effects of the MWLP are inherently uncertain given that the allocation of sites is primarily left to the Minerals Sites Plan (which will follow the MWLP). Nonetheless, the MWLP plays an important role by setting Development Management policy with a view to achieving the plan objective - ‘*Ensure minerals and waste sites are sensitive to both their surrounding environment and communities and minimise their impact on them.*’ For example, Policy DM16 - *Planning Obligations* - identifies a number of methods that should be employed to manage the impact of development on communities.

15.4.21 The plan will result in a considerable reliance on Energy from Waste (EfW) facilities (see discussion above, under the ‘climate change’ heading). These facilities can result in localised air quality impacts, and as such it is notable that Policy CSW9 - *Energy from Waste facilities for Non-hazardous Waste* – identifies that ‘*EfW facilities which exceed an annual design capacity for 150,000 tonnes per year of waste will be permitted subject to the applicant (or landowner) entering into an agreement to contribute to a Kent Community Fund or make other contributions in kind to the local community in which the facility is to be situated.*’

15.4.22 Other important considerations are as follows –

- Policy CSM8 establishes a policy framework for the exploration, appraisal and development of energy minerals, including unconventional hydrocarbons (e.g. shale gas), which could potentially have implications for health and well-being; and
- Transport of minerals and waste by road can result in negative effects for health and well-being. This issue is considered further below, under the ‘transport heading.

15.4.23 On balance, given the options that were reasonably ‘on the table’ (e.g. given that the option of placing a greater emphasis on recycling is not possible in view of the urgent need to make provision for new EfW capacity to enable a step change in C&I waste management practices, reducing reliance on landfill for this waste stream) it is **unlikely that the MWLP will have a negative effect** on the communities and well-being baseline. Neither is it likely that there will be a positive effect.

15.5 Sustainable economic growth

Relevant sustainability objectives

- Support economic growth and diversification

Appraisal of the preferred approach to minerals

Policy	CSM1	CSM2	CSM3	CSM4	CSM5	CSM6	CSM7	CSM8	CSM9	CSM10	CSM11	CSM12
Broad Implications	↔	↗	↗	↗	↗	↗	↗	↗	↗	↗	?	↗

15.5.1 Policy **CSM2** - *Supply of Land-won Minerals in Kent* – identifies the provision that will be made for the five key economic minerals through the allocation of sites in the Mineral Sites Plan.

15.5.2 In terms of **sand and gravel**, the preferred approach is to make provision for sufficient sand and gravel sites using the past 10 year sales data as an indicator (1.6mtpa). There is confidence that this approach will lead to sufficient headroom in the sand and gravel site allocations, i.e. ensure capacity to accommodate potentially large increases in demand during the plan period (given that the most recent annual sales data for land won aggregates in Kent identified that only circa 1mt of all land-won sand and gravel was sold). Separate landbanks are to be established for soft sand and sharp sand/gravel. This is a requirement as set out by government policy and guidance. Shortfalls over the plan period will be addressed from increased alternative supplies from wharves and rail depots and recycling facilities.

15.5.3 In terms of **silica sand**, a representation has been made by industry suggesting that further provision is needed urgently to replace dwindling local supplies of Pulverised Fuel Ash (PFA), which has become in short supply due to changes in Government policies on energy production. Without a certainty of supply it is suggested that the Ightham Works (which is a nationally significant producer of aircrete blocks) may become unviable. The respondent points out that Aylesford Quarry is closed. The response of KCC is that the policy will ensure sufficient provision, and does not need to be modified.

15.5.4 Also of note is the provision that is made for **brickearth**, namely that ‘*sufficient Specific Sites will be identified... to enable the maintenance of landbanks of permitted reserves equivalent to at least 25 years of production based on past sales.*’ The supporting text highlights that the Council’s preferred approach is that future supplies of brickearth should be maintained not only for brickworks in Kent, but also those in neighbouring authorities that are reliant on brickearth supplies from Kent. This approach performs well in terms of this ‘sustainable economic growth and diversification’ objectives.

15.5.5 In terms of **clay** (some types of which are also used for brick manufacture), it is the Council’s view that the stock of planning permissions is sufficient to cover any eventuality (i.e. to cover a situation whereby any of the dormant or closed brickworks re-opened or new brick works are established) and so the Mineral Sites Plan should not identify further sites. This approach reflects the NPPF requirement that MPAs maintain and enhance the diversity of brick clay available by making appropriate provision for their supply and take account of the need for provision of brick clay from a number of different sources to enable appropriate blends to be made. There are no operational brickworks remaining which use clay in the County, although there is one tile manufacturer which makes Kent Peg tiles, which has sufficient reserves for the plan period.

15.5.6 Policy **CSM3** - *Strategic Site for Minerals* – establishes that just one site will be included in the Plan as a ‘strategic site’. This is the cement works and its associated mineral reserves at Medway Works, Holborough. The Council identify that one of the reasons behind their preference is that, despite Kent having been the heartland of UK cement manufacture in the past, there are no cement works remaining in the County, and this site is likely to be the only opportunity to re-establish cement manufacture in Kent. From an ‘economy and employment’

perspective, there is benefit to diversifying the County's industrial base, and ensuring that Kent's historical association with a particular industry is not irrevocably lost. Other economic benefits associated with the strategic allocation are likely to be felt more locally. It is understood that delivering this site is made a more complex undertaking as a result of its position on the border of two minerals and waste planning authorities (Kent and Medway). It already has the benefit of an extant planning permission for sufficient minerals for at least 25 years supply for cement manufacture. However there would need to be significant changes agreed to the approved layout and design, which would require a fresh application being approved prior to the development of the site. Careful planning should help to maximize the job creation opportunity and secure the level of investment required to develop this site.

At a previous SA stage (2011) it was recommended that the County Council should “*Establish policy to dictate broadly how this site should be brought forward and therefore give a clear steer to any future planning application.*” The Draft Plan has since been improved by the inclusion of a map of the site and addition of criteria-based policy.

- 15.5.7 Policy **CSM4** - *Non-identified Land-won Mineral Sites* – will give the flexibility required for determining applications where landbank requirements indicate that no further reserves are required, but consideration of issues of ‘real need’ and ‘real supply’ may give sufficient weight for a non-allocated site to be granted permission. This is an issue that arose during the determination of the planning application for the proposed western extension to Hermitage Quarry (where the focus was crushed rock, for which the landbank at the Kent scale is more than sufficient for the entire plan period and beyond). Policy CSM4 is important given that there are some mineral resources that are the focus of safeguarding, and could be the focus of a planning application, for which a land bank will not be established (e.g. building stone). Similarly sites of secondary and recycled aggregates production may come forward in an unanticipated manner – an issue that is covered by **CSM6**.
- 15.5.8 Policy **CSM5** - *Land-won Mineral Safeguarding* – seeks to protect mineral resources from unnecessary sterilisation even where there is not currently a market demand. Safeguarding is also of central importance if the Local Plan is to support sustainable economic growth and ensure the maintenance of a diverse economic base in the long-term. Policy CSM5 establishes that Mineral Safeguarding Areas (MSAs) should be designated to protect scarce minerals including the Folkestone beds (building sand and silica sand), river terrace sand and gravel deposits, storm beach sand and gravel deposits, ragstone, building stone outcrops & brickearth. As chalk and clay are ubiquitous across the county they are not being safeguarded. However the cement minerals required to supply the proposed cement works at Holborough Works are being defined as a MSA. Policy DM7 is the development management policy that sets out in more detail how to treat developments which are incompatible with safeguarding the mineral within a Mineral Safeguarding Area. See discussion, below.
- 15.5.9 Policy **CSM8** - *Oil, Gas and Coal-bed Methane* – is supported by the Coal Authority who feel that it provides a suitably flexible policy against which to assess emerging coal technologies.
- 15.5.10 Policy **CSM11** - *Safeguarded Wharves and Rail Depots* - involves safeguarding all existing, planned and potential railheads, wharves for the bulk transport by rail or sea of minerals (including recycled, secondary and marine dredged aggregates). Measures are also proposed to minimise the risk of incompatible adjacent development, including development that could detrimentally impact vehicle access. Safeguarding wharf and railhead sites is important given that the need for minerals importation may well increase in the long-term as supplies of local land-won aggregates decrease. However, it has been suggested through consultation that the plan should not safeguard wharves that are not ‘currently economic’ where it would lead to the unnecessary sterilisation of land. It has been suggested that flexibility is key, as in certain instances there may be opportunities to relocate wharves (to an alternative site capable of serving the same market) and use the original wharf location for regeneration schemes, the benefits of which could outweigh the benefits of maintaining operational use (or the potential

for operational use).⁶⁹⁷⁰ It is not thought that there will be any significant negative effects in this respect given that Policy CSM11 will be implemented alongside Policy DM7, which identifies situations where the loss of safeguarded wharves and railheads would be acceptable. Furthermore, it is noted that Policy CSM 11now establishes that safeguarding ceases if the wharf becomes obsolete. The London Plan and the Mayor of London's Safeguarded Wharves review (2013) considers the viability of wharves in their safeguarding and provides exceptions policy stating that 'redevelopment of safeguarded wharves for other land uses should only be accepted if the wharf is no longer viable or capable of being made viable for waterborne freight.'

Appraisal of the preferred approach to waste management

Policy	CSW1	CSW2	CSW3	CSW4	CSW5	CSW6	CSW7	CSW8	CSW9	CSW10	CSW11	CSW12	CSW13	CSW14	CSW15	CSW16	CSW17	CSW18	CSW19
Broad Implications	↔	↔	↔	↗	↔	↗	↔	↔	↔	↔	↔	↔	↔	↔	↗	↔	↔	↔	↔

- 15.5.11 Policy **CSW4** - *Strategy for Waste Management Capacity* – establishes that sufficient waste management capacity will be provided to manage at least the equivalent of the waste arising in Kent plus a declining amount of waste from London. Provision for waste from London to go to non-hazardous landfill or EfW facilities in Kent is notable from a perspective of supporting ongoing regional/national economic growth/diversification. It is notable that capacity for non-hazardous London waste is set at a lower annual amount than was required by the RSS.
- 15.5.12 Policy **CSW6** - *Location of Non-strategic Waste Sites* – is important from a perspective of ensuring that smaller scale waste management facilities can come forward in appropriate locations, including on some industrial estates and in rural locations. Such facilities can provide important local employment opportunities and help to maintain local economic vitality.
- 15.5.13 Policy **CSW15** - *Disposal of Dredgings* – is a criteria-based policy that should have the effect of encouraging proposals for the disposal of dredgings. This is important policy given that dredging plays an important role in supporting coastal industries.

Appraisal of the preferred approach to DM policy

Policy	DM1	DM2	DM3	DM4	DM5	DM6	DM7	DM8	DM9	DM10	DM11	DM12	DM13	DM14	DM15	DM16	DM17	DM18	DM19	DM20	DM21	DM22	DM23
Broad Implications	↔	↔	↔	↔	↔	↔	↗	↔	↔	↔	?	↔	↔	↗	↔	?	↔	?	?	↔	↔	↔	↔

- 15.5.14 Numerous DM policies will have the effect of providing 'certainty' to potential developers including Policy **DM4** (Green Belt). Policy **DM11** – *Cumulative Impact* – will need to be implemented with caution if it is not to act as an undue 'brake' on development. Similar considerations apply in relations to Policies **DM16**, **DM18**, and **DM19** which deal with planning obligations, restoration and aftercare and afteruse respectively. Policy **DM7** (Safeguarding Mineral Resources and Importation Infrastructure) is important as it identifies a number of types of minor planning application that would be exempt from mineral safeguarding policy CSM5 (e.g. 'infill development of a minor nature in existing built up areas', 'minor extensions/alterations to existing uses and buildings' and 'any sites allocated in the local plan').

⁶⁹ For example, in Gravesham, where there are established regeneration objectives, there have been discussions around the potential to relocate the operations currently at the Red Lion Wharf, therefore removing a constraint to regeneration without leading to a reduction in overall wharf capacity locally. Most recently, both Kent County Council and the operator of Red Lion Wharf have confirmed that after an extensive search for an alternative wharf site in north Kent, no suitable alternative locations have been found to be available, so the ongoing safeguarding of Red Lion Wharf is very important to the strategy of the plan.

⁷⁰ Also, Canterbury City Council supports safeguarding of a working Harbour at Whitstable but is mindful of considering the needs and aspirations of the non-operations parts of the harbour.

- 15.5.15 Policy **DM14 - Safeguarding of Transport Infrastructure** - states that development will not be permitted where it will result in increased hazards to aviation, rail, river, sea or road transport. The protection of transport infrastructure is important from a perspective of supporting economic growth and regeneration in Kent.
- Summary**
- 15.5.16 The MWLP will help to ensure a steady and adequate supply of minerals in-line with market demand, and ensure that market demand can continue to be met into the future. This is important in terms of supporting development and industry within the County and the wider region. Numerous policies set criteria (locational and operational) that will need to be adhered to if a site is to be allocated / planning permission granted, but it is not expected that the combined effect of these policies will be to unduly constrain supply. Indeed, the effect of setting detailed policy is probably positive given that prospective developers will be provided with helpful 'certainty'.
- 15.5.17 A plan objective is to *'enable minerals and waste developments to contribute to the social and economic fabric of their communities through employment opportunities.'* It is felt that the allocation of a strategic site for minerals at Medway Works will contribute to this objective, as will decision that has been taken regarding provision for brickearth to supply local brickworks.
- 15.5.18 Overall, it is likely that the Plan will result in **significant positive effects** on the baseline at the Kent scale and also wider scales. Benefits are likely to be felt in both the short and long-term.

15.6 Flood risk

Relevant sustainability objectives

- Reduce the risk of flooding and the resulting detriment to public wellbeing, the economy and the environment

Appraisal of the preferred approach to minerals

Policy	CSM1	CSM2	CSM3	CSM4	CSM5	CSM6	CSM7	CSM8	CSM9	CSM0	CSM11	CSM12
Broad Implications	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔

15.6.1 It is not thought that the proposed delivery strategy for minerals will directly result in proposals coming forward in areas where flood risk will be worsened. Indeed, areas of minerals excavation can often provide opportunities for water storage at times of flood and therefore mitigate against the effects of flooding. The minerals strategy does include a focus on safeguarding wharves, but it is not thought that this will result in significant implications in terms of coastal flood risk.

Appraisal of the preferred approach to waste management

Policy	CSW1	CSW2	CSW3	CSW4	CSW5	CSW6	CSW7	CSW8	CSW9	CSW10	CSW11	CSW12	CSW13	CSW14	CSW15	CSW16	CSW17	CSW18	CSW19
Broad Implications	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	?	↔

15.6.2 It is not thought that the proposed delivery strategy for waste will directly result in proposals coming forward in areas where flood risk could be affected. However, flood risk must be a consideration of the Waste Sites Plan.

15.6.3 Sea level rise is an issue at Dungeness, where it is proposed there should be facilities for the storage of nuclear waste (Policy **CSW18**). However, it is not clear whether the on-going protection of Dungeness will result in significant coastal erosion / flood risk issues elsewhere.

Appraisal of the preferred approach to DM policy

Policy	DM1	DM2	DM3	DM4	DM5	DM6	DM7	DM8	DM9	DM10	DM11	DM12	DM13	DM14	DM15	DM16	DM17	DM18	DM19	DM20	DM21	DM22	DM23
Broad Implications	↗	↔	↔	↔	↔	↔	↔	↔	↗	↔	↔	↔	↔	↔	↔	↔	↔	↗	↗	↔	↔	↔	↔

15.6.4 Policy **DM9** - *Water environment* - includes an important criteria to ensure proposals will not exacerbate flood risk.

15.6.5 Policy **DM18** - *Restoration and Aftercare* - requires that restoration plans should include a consideration of drainage issues. More generally, the policy emphasises the importance of maximising biodiversity benefits, which in turn should ensure that wetland habitats are created in areas where they can usefully provide a flood water storage function.

At a previous SA stage (2013) it was recommended that: “Reference should be made to the importance of realising flood risk mitigation opportunities within [the Restoration and aftercare policy]”
 This recommendation has been accepted and a reference is now made within Policy DM18.

Summary

- 15.6.6 The provision made by the MWLP for minerals and waste development is unlikely to directly result in increased flood risk. Rather, this will need to be a consideration of the forthcoming Minerals and Waste Sites Plans. Similarly, although it should be the case that future minerals extraction has potential to contribute to efforts to manage flood risk (given that areas of minerals excavation can often provide opportunities for water storage at times of flood) this will not necessarily be a significant 'benefit' of this plan. The MWLP does include a useful policy on required 'restoration and aftercare' of minerals sites which should ensure consideration is given to flood risk management opportunities. On balance, it is **not clear that the MWLP will lead to a significant positive effect.**

15.7 Land

Relevant sustainability objectives

- Make efficient use of land and avoid sensitive locations

Appraisal of the preferred approach to minerals

Policy	CSM1	CSM2	CSM3	CSM4	CSM5	CSM6	CSM7	CSM8	CSM9	CSM10	CSM11	CSM12
Broad Implications	↔	?	↔	↔	↔	↗	↔	↔	↔	↔	↔	↔

15.7.1 Policy **CSM2** - *Supply of Land-won Minerals in Kent* – reflects the objective to take account of the contribution that substitute or recycled materials, mineral products and marine dredged aggregates would make to the supply of materials, before considering the extraction of primary materials. As such, it should perform well in terms of ‘land’ related sustainability objectives; however, the plan taken as a whole will not perform optimally in all respects (as discussed under other topic headings within this report) and so it is appropriate to conclude ‘uncertain implications’.

15.7.2 Policy **CSM6** - *Secondary and Recycled Aggregates* – will help to ensure that as much aggregate is recycled in Kent as is possible, therefore reducing the need for new landtake for minerals extraction. The policy identifies that sufficient Specific Sites will be identified to provide capacity to recycle at least 1.4million tonnes per annum (mtpa) of secondary and recycled aggregates rising to at least 1.56mtpa from 2020. Policy CSM6 also includes criteria for assessing further site proposals, which would be considered in addition to the allocated sites within the Mineral Sites Plan.

15.7.3 Policy **CSM11** - *Safeguarded Wharves and Rail Depots* - involves safeguarding all existing, planned and potential railheads, wharves and associated storage, handling and processing facilities for the bulk transport by rail or sea of minerals (including recycled, secondary and marine dredged aggregate materials). Measures are also proposed to minimise the risk of incompatible development adjacent or near to existing wharves. Policy **CSM10** - *Sustainable Transport of Minerals* – supports the development of new wharves and railheads. There is some suggestion that the policy should recognise a preference for making better use of existing wharves and railheads ahead of developing new facilities. However, it would be normal industry practice to maximise returns from investment in established viable wharves and railheads in advance of developing new sites.

15.7.4 Policy **CSM5** - *Land-won Mineral Safeguarding* – focuses on safeguarding sites for extraction. It is important to note that the purpose of safeguarding is that in the event that it is necessary for non-mineral development to take place in the MSA, then the County and district planning authorities should work together to encourage the prior extraction of minerals where practicable. Establishing MSAs on areas of proven resources does not imply extraction will necessarily ever take place, and for this reason the designation of MSAs does not imply that environmental impacts will occur. This is an important consideration, given that MSAs do intersect with some areas designated as SSSI.

Appraisal of the preferred approach to waste management

Policy	CSW1	CSW2	CSW3	CSW4	CSW5	CSW6	CSW7	CSW8	CSW9	CSW10	CSW11	CSW12	CSW13	CSW14	CSW15	CSW16	CSW17	CSW18	CSW19
Broad Implications	↔	↔	↔	↔	↔	↗	↔	↗	↔	↗	↗	↗	↔	↗	↔	↔	↔	↔	↔

15.7.5 Policy **CSW6** - *Location of Non-strategic Waste Sites* - will have an important effect in terms of ensuring proposals do not come forward on greenfield land. Indeed, it lists criteria that should encourage applications in locations where there is the potential to make most efficient use of

land, including contaminated or derelict land and redundant agricultural and forestry buildings and their curtilages.

- 15.7.6 Policy **CSW8** - *Waste Management for Non-hazardous Waste* – will have the effect of ensuring that waste is diverted from landfill. Policy CSW10 (Non-hazardous Waste Landfill in Kent) is supportive of this aspiration.
- 15.7.7 Policy **CSW12** – *Inert Waste Management in Kent* – requires that the non-recyclable fractions of Construction, Demolition and Excavation (CDE) wastes are targeted at quarry restoration projects as a priority. This is a sustainable use of the non-recyclable fractions of CDE wastes given concerns that quarry restoration schemes will not be completed / opportunities to restore agricultural land will be missed. A previous version of the policy (2013) also referred to the potential for inert waste disposal to be used as a method for restoring ‘despoiled land’; however, this reference has now been removed.
- 15.7.8 Policy **CSW14** - *Remediation of Brownfield Land* – is a criteria-based policy that should have the effect of encouraging temporary waste developments on brownfield land that facilitate remediation (i.e. by reducing or removing contamination from previous development). In addition to simply ‘making efficient use of land’, the remediation and redevelopment of brownfield land can be seen as beneficial from a perspective of supporting regeneration. This is key issue in some parts of the County, particularly within the Kent Thames Gateway.

Appraisal of the preferred approach to DM policy

Policy	DM1	DM2	DM3	DM4	DM5	DM6	DM7	DM8	DM9	DM10	DM11	DM12	DM13	DM14	DM15	DM16	DM17	DM18	DM19	DM20	DM21	DM22	DM23	
Broad Implications	↔	↔	↔	?	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↗	↗	↔	↔	↔	↔

- 15.7.9 Policy **DM4**- *Green Belt* – relates to mineral extraction within the Green Belt. Mineral extraction has always been an appropriate development within the Green Belt, even before the National Planning Policy Framework was issued. The Policy identifies criteria for ‘Green Belt enhancement’, which if achieved will mean that extraction may be appropriate.
- 15.7.10 Policy **DM18** - *Restoration and Aftercare* - promotes: "The restoration of the majority of the site back to agriculture, if the site consists of the best and most versatile agricultural land."
- 15.7.11 Policy **DM19** - *After-use* - addresses the important issue of restoring high grade agricultural land after minerals extraction. There is a need to plan for after-use at the earliest opportunity, through the preparation of restoration plans. This is the subject of Policy **DM15** - *Restoration and Aftercare* – which establishes that restoration plans should, for example, include details of types, quantities and source of soils or soil making materials to be used.
- 15.7.12 Policy **DM20** - *Aggregate Recycling* – establishes that permission will be granted for aggregate recycling facilities at existing mineral sites and mineral importation facilities provided that certain criteria are met. It will be important to ensure that such operations do not unduly lead to restoration being delayed.

Summary

- 15.7.13 The MWLP includes highly proactive policies that should help to ensure that as much aggregate is recycled in Kent as is possible, therefore reducing the need for new landtake for minerals extraction. Provision is made for sufficient sites to be allocated in the Minerals Sites Plan so that there is capacity to recycle at least 1.4million tonnes per annum (mtpa) of secondary and recycled aggregates rising to at least 1.56mtpa from 2020. Policy is also established for assessing site proposals that come forward in the future, subsequent to preparation of the Minerals Sites Plan (i.e. non-allocated sites). In addition, the MWLP is also supportive of efforts to increase the movement of minerals via wharves which should have the effect of encouraging supply of marine dredged aggregates.

- 15.7.14 In terms of waste, the plan is supportive of efforts to restrict the disposal of waste to landfill. It is also notable that there is a focus on ensuring that the non-recyclable fractions of Construction, Demolition and Excavation (CDE) wastes are targeted at quarry restoration projects as a priority.
- 15.7.15 On balance, it is likely that the MWLP will result in a **significant positive effect** on the baseline (bearing in mind that the 'future baseline' is assumed to be one where minerals and waste development would occur on a similar scale, but in less well planned way).

15.8 Landscape and the historic environment

Relevant sustainability objectives

- Protect and enhance Kent’s countryside and historic environment

Appraisal of the preferred approach to minerals

Policy	CSM1	CSM2	CSM3	CSM4	CSM5	CSM6	CSM7	CSM8	CSM9	CSM10	CSM11	CSM12
Broad Implications	↔	?	↔	↔	↗	↗	↗	↔	↔	↔	↔	↔

15.8.1 In terms of the potential for Policy **CSM2** - *Supply of Land-won Minerals in Kent* – to result in proposals coming forward in areas of sensitive countryside, an important consideration relates to the promotion of **silica sand** extraction, which may well occur within the Kent Downs AONB. Through consultation on Core Strategy ‘Issues’ the Kent Downs AONB Unit - a key stakeholder - accepted that extraction within the AONB and its setting could not be ruled out, but stressed that this should only occur after an ‘exhaustive search’ of alternative locations. Kent CPRE, in their comments provided at the same time, stressed that if more than one site is allocated in the AONB then these should be listed in order of priority for release. It is thought that the criteria set out within Policy CSM2 will ensure that impacts to the AONB are minimised. However, the Environment Agency have suggested that there is a need to define ‘exceptional circumstances’ more tightly. Another viewpoint put forward through consultation by a private sector interest group is that, because the silica sand in Kent is generally inferior to sources in Surrey and Cheshire, there cannot therefore be a ‘national need’ for extraction from the AONB, and only a national need for the mineral resource should ‘override’ the AONB designation. Of course, this viewpoint does not take into account the fact that it is also a national priority to reduce the unnecessary transportation of minerals. It should also be noted that defining silica sand is a difficult process. In Kent, the following combination of factors is taken into account: the degree of contamination from other sand strata quarries; the degree of processing that can be done at quarries; and the degree of processes undertaken at the factory. The application of these criteria reveal that the silica sand in Kent can be put to chemical usage (i.e. its purity is sufficient) and could therefore, satisfy a national need.

At a previous SA stage (2011) it was recommended that the policy could be strengthened by further emphasising the need to reflect the sensitive nature of the environmental baseline within the AONB when it is the case that development in the AONB is unavoidable.

The policy was subsequently strengthened by a new requirement to consider – when judging whether there is an ‘exceptional’ need for development and/or development is in the public interest – “(iii) any detrimental effect on the environment, the landscape and recreational opportunities, and the extent to which that could be moderated.”

However, the latest policy approach does not include this text. It does, however, specify that the KCC, when identifying sites in the Minerals Sites Plan, will need to demonstrate that the mineral resource will be of a sufficient quality to meet the needs of industry. This may be a difficult test to pass, given that silica sand is not of a high quality in some locations in Kent, and so the effect could be to reduce the potential for the allocation of sites for silica sand in the AONB.

15.8.2 Another important consideration relates to the discussion under the heading of **aggregates**. The current policy approach – “Provision will be made for landbanks of land-won aggregates. This will consist for a landbank of at least 7 years of sharp sand and rolling landbanks for the whole of the plan period of at least 7 years for soft sand at least 10 years for crushed rock.” - reflects concerns raised by Kent Downs AONB with regards to the previous policy approach, which would have involved the maintenance of a joint landbank for both soft and sharp sands for use as aggregates. This should result in fewer soft sand sites being identified in the Minerals Sites Plan. There is a resource of soft sand which is at the foot of the North Downs where mineral extraction could have an adverse effect upon the setting of the AONB. No other representations have been submitted about this aspect of existing Policy CSM2.

- 15.8.3 Also, in relation to **Brick Earth**, English Heritage have stated their support for the policy approach: “We are pleased to see Policy CSM 2- allowing for the identification of new sites for brickearth extraction for brick manufacture.” English Heritage also “note the view that there are sufficient clay reserves identified to meet current Kent peg tile manufacturing needs”, and go on to request that: *“If additional need for clay for peg tiles can be demonstrated in the future we would hope that the Plan could be amended to include identification of new sites if such are required to meet the additional need.”* In response, KCC state that: *“Any additional future needs are dealt with by Policy CSM4: Non-identified Land-won Mineral Sites and if circumstances change considerably the Plan can be reviewed.”*
- 15.8.4 Policy **CSM7- Building Stone in Kent** – encourages small scale operations to come forward to meet demand for conservation building stone. Availability of conservation building stone has important sustainability implications in terms of townscape, landscape, heritage and sense of place. Building stone is particularly important for restoration work associated with the maintenance of Kent’s historic buildings and structures and new build projects in conservation areas. It is understood that building stones have historically been worked from several discrete areas in Kent, but that only building stone sourced from ragstone is now worked. The plan helpful defines a small scale building stone extraction site as one which *produces predominantly building stone for conservation and restoration of old buildings or for new build purposes in areas where the stone provides historically authentic materials in keeping with the local built environment. Operations are likely to be intermittent and volumes produced are low.*
- 15.8.5 In terms of safeguarding (Policy **CSM5**) it is noteworthy that Kent AONB Unit suggested (through the consultation on Core Strategy ‘Issues’) that: *‘all deposits of conservation building stone should be within a Mineral Consultation Area as these deposits tend to vary hugely in quality.’* From a conservation building perspective it is particularly important that Kentish Ragstone of different types is safeguarded, given that it varies in its petrology and many different variations are utilised within historic buildings and new buildings in historically sensitive areas (for example, walls, parapets, windows and door mullions all utilise different petrological compositions of Kentish Ragstone). One respondent to a previous consultation suggested that the supply of Kentish Ragstone is currently limited, and that if this continues to be the case churches and other historic buildings (for example Rochester Castle, the Bishop’s Palace in Maidstone, the city walls at Canterbury) will need to rely on imported foreign stone or alternative native stone which is out of keeping with historic character and local distinctiveness.

Appraisal of the preferred approach to waste management

Policy	CSW1	CSW2	CSW3	CSW4	CSW5	CSW6	CSW7	CSW8	CSW9	CSW10	CSW11	CSW12	CSW13	CSW14	CSW15	CSW16	CSW17	CSW18	CSW19
Broad Implications	↔	↗	↔	?	↔	↗	↗	↗	↔	↗	↗	↗	↔	↔	↔	↔	↔	↔	↔

- 15.8.6 Policy **CSW4** presents a Strategy for Waste Management Capacity. Minimising the disposal of waste (inert and non-hazardous) to landfill is the priority from a landscape perspective. It is noted that 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 a declining amount of waste from London*. This could have negative implications for landscape (on the assumption that landscapes in Kent are more sensitive than those in London); however, this is not clear cut, and the fact is that managing some of London’s waste is an unavoidable reality.
- 15.8.7 Policy **CSW6 - Location of Non-strategic Waste Sites** - includes important criteria to ensure facilities come forward in locations away from sensitive receptors, including on previously developed land. In terms of ‘agricultural and forestry buildings and their curtilages’ it is noted that these must be ‘redundant’ to be considered suitable (as opposed to ‘underused’).

15.8.8 Policy **CSW12 – Inert Waste Management in Kent** – requires that the non-recyclable fractions of Construction, Demolition and Excavation (CDE) wastes are targeted at quarry restoration projects as a priority. A previous version of the policy (2013) also referred to the potential for inert waste disposal to be used as a method for restoring ‘despoiled land’; however, this reference has now been removed. As with all criteria based policies included within the consultation document, this policy identifies that permission will only be granted where the proposal does not cause unacceptable harm to the environment or communities. However, this policy also goes considerably further, through setting a requirement that the proposal must be able to demonstrate ‘environmental benefits’.

Appraisal of the preferred approach to DM policy

Policy	DM1	DM2	DM3	DM4	DM5	DM6	DM7	DM8	DM9	DM10	DM11	DM12	DM13	DM14	DM15	DM16	DM17	DM18	DM19	DM20	DM21	DM22	DM23
Broad Implications	↗	↗	↗	↗	↗	↗	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↗	↗	↔	↔	↔	↔

15.8.9 Several of the DM Policies make reference to the importance of not causing unacceptable harm to the environment or not causing undue or overriding harm to the environment.

15.8.10 Policy **DM2 - Environmental and Landscape Sites of International, National and Local Importance** – seeks to ensure ‘no significant adverse effect’ to sites designated for nature conservation or heritage purposes as well as a range of other assets including; AONBs and their setting, aged and veteran trees; ‘important areas of open space or green areas within built-up areas’; local waterbodies; non-designated heritage assets of archaeological interest that are demonstrably of equivalent significance to scheduled monuments; and land or buildings in recreational or tourism use.

15.8.11 Importantly, the policy establishes a ‘test’ that must be passed in order for development within the AONB to be acceptable. The test reflects the *national* need criteria which is required under para. 116 of the NPPF and applies to all minerals and waste developments. The previous version of DM2 had AONB as a constraint for all types of development but the test was *overriding* need. The implication is that the plan policies are much stricter about the circumstances when development could be acceptable within the AONB.

15.8.12 Policy **DM4 - Green Belt** - sets useful criteria to ensure that the functions of the Green Belt are maintained / development will only be allowed in the Green Belt if it will that the development will enhance the Green Belt. The Policy also states that proposals for minerals and waste developments situated within the Green Belt will need to implement extremely high operational environmental standards.

15.8.13 Policies **DM5** and **DM6** cover heritage assets / the historic environment. DM6 establishes specific processes that must be implemented (including with a view to ensuring good archaeological practice) and specific issues that must be a focus (e.g. the ‘fabric, setting and amenity value’ of assets) with a view to ensuring the conservation of heritage assets / the historic environment. It is notable that a previous version of Policy DM5 referred to the need to protect designated assets and ‘other sites of historical importance’, whilst the current version refers simply to the need to protect heritage assets ‘in a manner appropriate to their significance’. The current wording is in-line with the NPPF; and also it is noted that a requirement of Historic Environment Assessment is that ‘preliminary historic environment assessment’ is undertaken “to determine the nature and significance of the heritage assets.”

15.8.14 Policy **DM18 - Restoration and Aftercare** – requires that consideration is given to ‘key landscape opportunities and constraints’. It is also noted that there is an emphasis on the conservation of soil resources, which is considered appropriate. This policy will be central to achievement of the plan objective - ‘restore minerals sites to the highest possible standard and incorporate opportunities for... recreation, agriculture and employment uses.’

Summary

- 15.8.15 Whilst minerals extraction clearly has the potential to impact negatively on landscape, the effects of the Plan are inherently uncertain given uncertainty over the particular sites / schemes that will come forward 'on the ground'. The Draft Plan does specify that silica sand extraction can occur in the AONB, but strict criteria are established to ensure that this only occurs in exceptional circumstances where the operator is willing to apply the highest operational standards.
- 15.8.16 An important consideration relates to the degree to which the strategy for minerals will support the extraction of minerals for heritage building products as there is an identified need to maintain a diverse supply. The Plan will ensure that resources are safeguarded, and also puts in place policy to encourage small scale operations to come forward to meet demand for conservation building stone in the future.
- 15.8.17 As discussed above under the 'biodiversity' and 'communities' headings, numerous policies are in place to ensure that minerals and waste development comes forward in the most suitable locations and in such a way that the negative effects on the surrounding area are mitigated. Policy DM18 - *Restoration and aftercare* – establishes some landscape related priorities, including setting a requirement that consideration is given to 'key landscape opportunities and constraints'. This policy will be central to achievement of the plan objective - *'restore minerals sites to the highest possible standard and incorporate opportunities for... recreation, agriculture and employment uses.'*
- 15.8.18 On balance, given the likely future baseline without the plan (which, it is assumed, would always be one that involves some potential for minerals extraction in the AONB), it is not clear that the MWLP will lead to significant negative effects. In the very long term, there could be some localised positive landscape effects as high quality restoration schemes are implemented.
- 15.8.19 In terms of the historic environment, the Plan takes a proactive approach that recognises the importance of issues that might otherwise be overlooked. As such, it is suggested that the plan will lead to **significant positive effects** in terms of the historic environment.

15.9 Transport

Relevant sustainability objectives

- Reduce and minimise unsustainable transport patterns and facilitate the transport of minerals and waste by the most sustainable modes possible

Appraisal of the preferred approach to minerals

Policy	CSM1	CSM2	CSM3	CSM4	CSM5	CSM6	CSM7	CSM8	CSM9	CSM10	CSM11	CSM12
Broad Implications	↔	?	↗	↔	↗	↗	↗	↔	↔	↗	↗	↔

15.9.1 Policy **CSM2** - *Supply of Land-won Minerals in Kent* – clearly has implications in terms of minimising the need to import minerals (into Kent) by road and also minimising the need for neighbouring Counties to import mineral from ‘far afield’ when they could receive the required mineral resource from Kent. Of note is the approach that is taken to brickearth, i.e. that future supplies of brickearth should be maintained not only for brickworks in Kent, but also those in neighbouring authorities that are reliant on brickearth supplies from Kent. This approach goes against the proximity principle somewhat, but is probably appropriate on-balance. Also, the approach to silica sand will mean that extraction can occur in the AONB in exceptional circumstances, which may have the effect of negating the need for silica sand to be transported long distances (equivalent supplies being located in Surrey and Cheshire).

15.9.2 Another key issue relates to 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. Safeguarding of these key sites is achieved through Policy **CSM11** - *Safeguarded Wharves and Rail Depots*. Furthermore, Policy **CSM10** - *Sustainable Transport of Minerals* - identifies that well located new wharves and railheads can come forward. It will likely be the case that new importation facilities are relatively well located in terms of proximity to the County’s growth areas and also in terms of proximity to the major road network. Well located wharves and railheads will help to ensure that the need to transport minerals by HGV traffic (a form of transport that can negatively impact on the local environment) is minimised.

15.9.3 In addition to setting a target for the allocation of specific sites for aggregate recycling, Policy **CSM6** - *Secondary and Recycled Aggregates* - seeks to provide clarity on the situations whereby recycling facilities can and should come forward as part of other projects. This should help to bring about a greater mix of aggregate recycling opportunities and so address the existing problem of recycling capacity existing in Kent being under-utilised. It should also lead to a situation whereby the need to transport material is minimised. A criteria is included to ensure that aggregate recycling facilities come forward in close proximity to the source of materials, and in areas with good infrastructure links. It is noted that the re-working of old inert landfills is encouraged.

Appraisal of the preferred approach to waste management

Policy	CSW1	CSW2	CSW3	CSW4	CSW5	CSW6	CSW7	CSW8	CSW9	CSW10	CSW11	CSW12	CSW13	CSW14	CSW15	CSW16	CSW17	CSW18	CSW19
Broad Implications	↔	↔	↔	↗	↗	↗	↗	↗	↗	↗	↔	↔	↔	↔	↔	↔	↔	↔	↔

- 15.9.4 The preferred strategy for the provision of waste management capacity should have the effect of ensuring that the proximity principle is strictly adhered to, i.e. waste is managed close to the source of production. In terms of MSW, the focus for management of this waste stream during the plan period is to facilitate an increase in recycling and to ensure that residual waste can be bulked up for transportation to the Allington Waste to Energy facility. This strategy for MSW reflects a ‘low growth’ forecast (which most closely reflects changes in MSW in recent years); however, in any event, KCC has contracts with waste management companies for relevant ranges of waste arisings, including contingency arrangements should arisings increase.

- 15.9.5 Policy **CSW4** – *Strategy for Waste Management Capacity* - makes an important commitment to self-sufficiency, although the supporting text highlights that in practice there will still be the need for waste to transport into and out of Kent. This is pragmatic, given that there are existing constraints across the region (e.g. geology, environmental designations, transport connections, population distribution) that mean some areas are better placed to make a contribution to the management of particular waste streams than others. The need for cross boundary movement of waste can be particularly pertinent for landfill waste. The development of the Waste and Minerals Core Strategy in East Sussex has revealed that there are very few opportunities for landfill in the short to medium term and it is therefore possible that residual waste may need to be exported to Kent (and other locations) for management. Transferring landfill waste across County borders (from East Sussex to Kent, or from Kent to South Essex as has been mooted as an option given that the Thames Gateway growth area straddles the two Counties) can arguably be in-line with the proximity principle, but would go against the goal of achieving self-sufficiency at the County scale.

- 15.9.6 Policy **CSW6** - *Location of Non-strategic Waste Sites* - is geared towards ensuring that waste sites come forward in parts of the County where there is an identified need / in close proximity to the sources of waste. As such, this policy should successfully help to reduce the need to transport waste, with resulting benefits in terms of minimising greenhouse gas emissions. Policy CSW6 should also ensure that opportunities for co-locating sources of waste and waste management facilities are capitalised upon.

- 15.9.7 In terms of specific proposals for waste management capacity, Policy **CSW7** - *Identifying Sites for Municipal Solid Waste* - sets specific proposals for Household Waste Recycling Centre to serve the Borough of Tonbridge and Malling a MSW Transfer Station in the Borough of Ashford. The proposal for Ashford was also suggested within the Core Strategy ‘Issues’ consultation document, and the general response was positive.

Appraisal of the preferred approach to DM policy

Policy	DM1	DM2	DM3	DM4	DM5	DM6	DM7	DM8	DM9	DM10	DM11	DM12	DM13	DM14	DM15	DM16	DM17	DM18	DM19	DM20	DM21	DM22	DM23
Broad Implications	↗	↗	↔	↗	↔	↔	↔	↔	↗	↔	↗	↔	↔	↔	↔	↗	↔	↗	↗	↔	↔	↔	↔

15.9.8 Policy **DM7** - *Safeguarding Mineral Resources and Importation Infrastructure* – identifies the situations when planning permission may be granted for non-mineral developments which are incompatible with safeguarding importation infrastructure within a Safeguarded Wharf or Railhead.

15.9.9 Policy **DM12** - *Transportation of Minerals and Waste* - states that ‘*Minerals and waste development will be required to minimise road miles except where there is no practicable alternative to road transport which would be environmentally preferable...*’

At a previous SA stage (2011) it was recommended that the County Council should word this policy in a way that emphasises the point that minerals and waste development will be required to minimise road miles except where there is no practicable alternative to road transport which would be environmentally preferable. This recommendation has been accepted.

15.9.10 Policy **DM20** - *Aggregate Recycling* – will have the effect of encouraging aggregate recycling facilities where at existing mineral sites and mineral importation facilities provided that they are located close to the source of materials.

Summary

15.9.11 A plan objective is to ‘*encourage the use of sustainable modes of transport for moving minerals and waste long distances and minimise road miles*’ and it is clear that this objective has ‘driven’ the development of the preferred strategy for minerals and waste.

15.9.12 In terms of minerals, a key issue relates to 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. This is an issue that is given detailed consideration through policy. There is also helpful policy to ensure that and encourage aggregates recycling facilities to be located close to the source of materials.

15.9.13 The preferred strategy for the provision of waste management capacity should have the effect of ensuring that the proximity principle is strictly adhered to, i.e. waste is managed close to the source of production. Policy CSW4 - *Strategy for Waste Management Capacity* - makes an important commitment to self-sufficiency, although the supporting text highlights that in practice there will still be the need for waste to transport into and out of Kent. This is pragmatic, given that there are existing constraints across the region (e.g. geology, environmental designations, transport connections, population distribution) that mean some areas are better placed to make a contribution to the management of particular waste streams than others. The need for cross boundary movement of waste can be particularly pertinent for landfill waste. Policy CSW6 - *Location of Non-strategic Waste Sites* - is geared towards ensuring that waste sites allocated within the forthcoming Waste Sites Plan are located in parts of the County where there is an identified need / in close proximity to the sources of waste. As such, this policy should successfully help to reduce the need to transport waste.

15.9.14 On balance, although there are some decisions that have been made that go against a strict adherence to the proximity principle, it is clear that the Plan will have a **significant positive effect** on the baseline.

15.10 Water

Relevant sustainability objectives

- Maintain and improve the water quality of the Kent’s rivers, ground waters and coasts, and achieve sustainable water resources management

Appraisal of the preferred approach to minerals

Policy	CSM1	CSM2	CSM3	CSM4	CSM5	CSM6	CSM7	CSM8	CSM9	CSM0	CSM11	CSM12
Broad Implications	↔	↔	↔	↔	↔	↔	↔	?	?	↔	↔	↔

15.10.1 One consideration relates to the role of the minerals strategy in terms of enabling future exploration and possible development of oil, gas and coal-bed methane in Kent. A criteria-based policy (Policy **CSM8**) gives encouragement to exploratory projects, subject to the minimisation of any risk to the environment. It is understood that risks to the water environment can be associated with hydraulic fracturing techniques that are used for the exploitation of gas reserves within shale. A local Friends of the Earth group has stated that: *“Locally, the most serious likely environmental impact of drilling is on the water supply. With approximately 70% of our water coming from aquifers anything that might compromise their integrity needs to be treated with the utmost circumspection. We believe that the precautionary principle should be applied... [i.e.] a prohibition on direct discharges to groundwater, and (to cover indirect discharges) a requirement to monitor groundwater bodies so as to detect changes in chemical composition...”* In response, KCC highlight that: *“Potential unacceptable adverse local Kent impacts to the environment are controlled by planning conditions and EA controls... Environmental impacts will be assessed through the Plan policies including CSM1, DM9, DM10, DM11, DM12, DM17 and DM18”.*

At a previous SA stage (2011) it was recommended that the County Council should *“... refer to the need to avoid impacts to ground water, water bodies and wetland habitats (of which important examples are found in North and East Kent).”*

The Draft Plan has since been improved by the inclusion of the following criteria: *“... subject to... there being no significant impact upon sensitive water receptors including groundwater, water bodies and wetland habitats.”*

15.10.2 Policy **CSM9** - *Prospecting for Carboniferous Limestone* – gives rise to fewer issues.

Appraisal of the preferred approach to waste management

Policy	CSW1	CSW2	CSW3	CSW4	CSW5	CSW6	CSW7	CSW8	CSW9	CSW10	CSW11	CSW12	CSW13	CSW14	CSW15	CSW16	CSW17	CSW18	CSW19
Broad Implications	↔	↗	↔	?	?	↔	↔	↔	↔	↗	↗	↔	↔	↔	↔	↗	↔	?	↔

15.10.3 A key consideration is the degree to which the waste strategy will divert waste away from landfill, given that landfill of non-inert waste has the potential to result in leachate polluting the water environment. The waste strategy sets out to meet and exceed (wherever possible) the Landfill Directive targets for diverting biodegradable Municipal Solid Waste (MSW) away from landfill. Hence, it is thought that significant effects will be minimised. However, the strategy (**CSW4** and **CSW5**) does encourage Energy from Waste despite this leading to the production of hazardous flue ash as a by-product, which then needs to be landfilled, potentially leading to risks to water quality. Landfill of flue ash would appear to be necessary given the current state of recycling technologies. The MWLP will, however, ‘leave the door open’ for proposals to come forward that would apply recycling technologies. In particular, technologies exist to treat the ‘flue ash’ so that it can be manufactured into secondary aggregate products. It is notable that the Environment Agency, through the consultation on Core Strategy ‘Issues’, suggested

that treatment could take place at the source of the waste (i.e. the incinerator) as occurs at London Waste's Edmonton plant.

- 15.10.4 Policy **CSW10** - *Non-hazardous Waste Landfill in Kent* – establishes that planning permission will only be granted for new sites or extensions to existing sites if it can be demonstrated that the waste stream that needs to be landfilled cannot be managed through alternative technologies that are higher in the Waste Hierarchy or disposed of at existing sites.
- 15.10.5 Policy **CSW11** - *Development at Closed Landfill Sites* – is also important given that closed landfill sites containing biodegradable material can result in significant on-going release of leachate to soils and groundwater. Over time many closed landfill sites will require some form of re-working to maintain designed gas and leachate control systems. This criteria-based policy should have the effect of encouraging development that is able to address these issues. Each site will present its own unique set of challenges. In Kent, historically many sites were constructed on the principal of dilute and disperse (i.e. No liner) which brings its own set of issues. It is also worth noting that the Woodland Trust suggest that *“This policy should make reference to the long term benefits that the planting of short rotation coppice (SRC) on landfill caps can provide. SRC can provide site specific benefits through reducing the need to tanker away leachate on a long term basis, this produces cost saving benefits.”*⁷¹
- 15.10.6 Policy **CSW16** - *Wastewater Development* – seeks to ensure that waste water treatment works and sewage sludge treatment and disposal facilities will be granted planning permission, subject to: (a) there being a proven need for the proposed facility; and (b) the proposal avoids causing unacceptable harm to the environment or communities.
- 15.10.7 Policy **CSW18** - *Nuclear Waste Treatment and Storage at Dungeness* - identifies the Dungeness site as a suitable location for storage and/or management of radioactive waste although important caveats are included to ensure that this will not happen before further detailed investigation is undertaken. It is important to consider that Dungeness is a highly sensitive environment and also one that is vulnerable to sea level rise. It is noted that there is reference to the need to ‘minimise adverse effects on the environment’, rather than ‘not cause unacceptable harm to the environment or communities’. It is noted that the criteria do not refer to particular environmental sensitivities, although DM policies should ensure that all issues are considered as part of any application. As part of the consultation on Core Strategy ‘Issues’, Veolia Water suggested that criteria should ensure measures are taken to ‘contain and isolate the new treatment and storage facilities to avoid the risk of contaminating the Denge Beach aquifer or water bearing strata that feed it.’

Appraisal of the preferred approach to DM policy

Policy	DM1	DM2	DM3	DM4	DM5	DM6	DM7	DM8	DM9	DM10	DM11	DM12	DM13	DM14	DM15	DM16	DM17	DM18	DM19	DM20	DM21	DM22	DM23
Broad Implications	↗	↗	↗	↔	↔	↔	↔	↔	↗	↔	↗	↔	↔	↔	↔	↗	↔	↗	↗	↔	↔	↔	↔

- 15.10.8 Policy **DM9** - *Water Environment* – states that: *“Planning permission will be granted for minerals or waste development where it does not: result in the deterioration of physical state, water quality or ecological status of any waterbody; or have an unacceptable impact on groundwater Source Protection Zones.”* It is noted that the Environment Agency, through consultation, have suggested that the policy should go further by stating that, in order to support the objectives of the Water Framework Directive and the actions of the relevant River Basin Management Plan’s, any minerals or waste development proposal must include measures to achieve improved ecological status of all waterbodies within the site and/or hydrologically connected to the site; and that no waste developments will be permitted in Source Protection Zones (SPZ) 1 or SPZ2. The RSPB also suggest that *“This policy presents*

⁷¹ This is on the basis that it may be possible to use the leachate to irrigate the coppice. Opportunities would be very much site specific and as much of Kent lies on top of aquifers (given our geology), it may be unlikely that the EA would permit this. More information is available @ http://www.environment-agency.gov.uk/static/documents/Research/leachate_1965094.pdf

an opportunity to promote mineral sites as a means of providing flood alleviation, and to help restore natural ecological functioning to floodplains and wetland habitats by linking existing wetland habitats.”

Summary

- 15.10.9 A key consideration is the degree to which the waste strategy will divert waste away from landfill, given that landfill of non-inert waste has the potential to result in leachate polluting the water environment. The waste strategy sets out to meet and exceed (wherever possible) the Landfill Directive targets for diverting biodegradable Municipal Solid Waste (MSW) away from landfill. However, the strategy does encourage Energy from Waste despite this leading to the production of hazardous flue ash as a by-product, which then needs to be landfilled, potentially leading to risks to water quality. Landfill of flue ash would appear to be necessary given the current state of recycling technologies.
- 15.10.10 An important ‘core’ waste policy is also in place that will support the re-working of closed landfill sites (important given that closed landfill sites containing biodegradable material can result in significant on-going release of leachate to soils and groundwater).
- 15.10.11 Another important issue – which has implications in terms of more than just the water environment – is the matter of nuclear waste treatment and storage at Dungeness. It appears that the preferred policy approach steers a sensible course, although this is something that will clearly require careful on-going consideration.
- 15.10.12 In terms of Development Management Policy, Policy DM9 - The water environment – states that: *“Planning permission will be granted for minerals or waste development where it does not: result in the deterioration of physical state, water quality or ecological status of any waterbody; or have an unacceptable impact on groundwater Source Protection Zones.”* This would appear to be a robust approach, although there could be the potential for the policy to provide more detail that might aid interpretation down the line.
- 15.10.13 Overall, **it is not thought that any of the options chosen have significant negative implications** for the water environment. However, it is not clear that the plan goes far enough to ensure significant positive effects on the baseline.

16 CONCLUSIONS AT THIS CURRENT STAGE

- 16.1.1 The appraisal of presented above finds that the draft ('Submission' version) plan if implemented would lead to significant positive effects in terms of a number of sustainability issues/objectives. In summary -
- 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 realise the potential for minerals development to contribute to biodiversity.
 - 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.
 - '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.
 - 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.
 - '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.
- 16.1.2 No significant negative effects / trade-offs are identified and no recommendations remain outstanding at this current stage⁷²; however, the appraisal does question the preferred approach in relation to a small number of key issues. In particular -
- Support is provided to Energy from Waste (EfW) facilities despite EfW not being 'at the top' of the waste hierarchy. This policy support for EfW reflects the urgent need to make provision for new capacity to enable a step change in C&I waste management practices, with a major reduction in reliance on landfill for this waste stream. Importantly, policy is set that 1) requires EfW facilities to produce both heat and power; and 2) restricts the capacity of EfW that will be permitted to a maximum of 437,000 tonnes (until such time as annual monitoring shows that the restriction would result in the loss of remaining non-hazardous landfill in the county before the end of the plan period). The 'capping' of EfW will have the effect of ensuring that recycling and composting operations, which are more preferable in terms of the waste hierarchy, are also encouraged. The policy approach is probably appropriate. There is no shortage of land for alternative facilities (mostly Anaerobic Digestion and dirty MRFs) given that such facilities will tend to require relatively small sites (30 to 50,000 tonnes per annum capacity). EFW facilities need about 90,000 tpa capacity to be viable as 'merchant facilities', and so require larger sites (which are fewer and, unless allocated, are at risk of being lost to piecemeal development for industrial and commercial uses).
 - 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.

⁷² Numerous recommendations have been made in relation to earlier 'working drafts' of the plan. These recommendations, and the Council's responses, are presented in 'boxes' embedded within the appraisal text above (Chapter 15)

PART 4: WHAT ARE THE NEXT STEPS (INCLUDING MONITORING)?

17 INTRODUCTION (TO PART 4)

The SA Report must include...

- A description of the measures envisaged concerning monitoring

17.1.1 This Part of the SA Report explains the next steps that will be taken as part of the plan-making / SA process, including in relation to monitoring.

18 PLAN FINALISATION, ADOPTION AND MONITORING

18.1.1 Once the period for public representations has finished the main issues raised will be identified and summarised by the Council, who will then consider whether the plan can still be deemed to be ‘sound’. Assuming that this is the case, the Plan (and the summary of representations received) will be submitted for Examination.

18.1.2 At Examination the Inspector will consider representations (alongside the SA Report) before then either reporting back on the Plan’s soundness or identifying the need for modifications. If the Inspector identifies the need for modifications to the Plan these will be prepared and then subjected to consultation.

18.1.3 Once found to be ‘sound’ the Plan will be formally adopted by the Council. At the time of Adoption a ‘Statement’ must published that sets out (amongst other things) *‘the measures decided concerning monitoring’*.

18.2 Monitoring

18.2.1 At the current stage – i.e. in the SA Report - there is a need to present *‘a description of the measures envisaged concerning monitoring’* only.

18.2.2 The Draft (‘Submission’ version) Plan document includes a monitoring framework that is set to be used to assess the performance of the Local Plan over its course up to 2030. Monitoring indicators are presented for each of the 14 plan objectives. The Table below highlights a range of the proposed monitoring indicators that are important from an ‘SA perspective’, i.e. given the strategic issues that a focus of the appraisal presented in this report.

Table 18.1: A selection of monitoring indicators proposed within the MWLP

PROPOSED INDICATOR	COMMENTARY
Number of minerals applications granted for wharf and rail head facilities that include the transport of mineral by sustainable means (e.g. water or rail). & Loss of the listed safeguarded mineral importation facilities to alternative development, or severely constrained by nearby developments.	Transportation of minerals by rail is a key means of ensuring that minerals demand can be met whilst minimising climate change and community/well-being impacts (associated with transportation by road). Development at wharves and railheads is necessary if a shift towards greater transportation by rail is to be achieved.
Annual secondary and recycled aggregate production and capacity.	Aggregate recycling reduces the need for primary / land won minerals extraction. Support for aggregate recycling capacity is, therefore, one of the key means by which the plan can support the achievement of sustainability objectives (e.g. relating to landscape).
Number of planning applications submitted/ granted for improved restoration and/or reduction of emissions at Closed Biodegradable Landfill Sites	The plan is clear that applications for reduction of emissions at Closed Biodegradable Landfill Sites will be looked upon favourably given the imperative of addressing climate change mitigation.

<p>All indicators that relate to policy DM2: Sites of International, National and Local Importance</p>	<p>One proposal is to monitor the number of applications granted for sites adjacent to areas of biodiversity importance. It is recommended that it may be appropriate to monitor the proximity of all minerals applications to areas of biodiversity importance.</p>
<p>Number and type of minerals and waste developments delivering measurable enhancements to their surrounding environment and communities (E.g. through area strategies such as Biodiversity Action Plans).</p>	<p>This is an important monitoring indicator, but it is suggested that it may need to be further developed so that it is itself measurable.</p>
<p>Existing waste capacity by waste facility type, and Kent County Council new waste capacity granted by quantity and type as categorised by the waste hierarchy. & Rate of growth in MSW arisings and C&I arisings. & Remaining capacity of non hazardous landfill.</p>	<p>It will be important to monitor the waste management situation closely to ensure that any further development of EfW capacity is fully justified (given that EfW capacity in place may reduce the potential to shift to recycling and composting).</p>

APPENDIX I: REGULATORY REQUIREMENTS

Annex I of the SEA Directive (which is transposed as Schedule II of the SEA Regulations) prescribes the information that must be contained in the SA Report; however, interpretation of Annex I is not straightforward. The table below explains how we (URS) interpret Annex I requirements.

<u>Annex 1</u>	<u>Interpretation of Annex I</u>		
<i>The report must include...</i>	<i>The report must include...</i>		
(a) an outline of the contents, main objectives of the plan and relationship with other relevant plans and programmes;	An outline of the contents, main objectives of the plan and relationship with other relevant plans and programmes	i.e. answer - <i>What's the Plan seeking to achieve?</i>	i.e. answer – <i>What's the scope of the SA?</i>
(b) the relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan	Any existing environmental problems which are relevant to the plan including, in particular, those relating to any areas of a particular environmental importance	i.e. answer - <i>What's the 'context'?</i>	
(c) the environmental characteristics of areas likely to be significantly affected;	The relevant environmental protection objectives, established at international or national level	i.e. answer - <i>What's the 'baseline'?</i>	
(d) 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 and 92/43/EEC;	The relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan'		
(e) the environmental protection objectives, established at international, Community or Member State level, which are relevant to the plan and the way those objectives and any environmental considerations have been taken into account during its preparation;	The environmental characteristics of areas likely to be significantly affected	i.e. answer - <i>What are the key issues & objectives?</i>	
(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;	Any existing environmental problems which are relevant to the plan including, in particular, those relating to any areas of a particular environmental importance		
(g) the measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment of implementing the plan;	Key environmental problems / issues and objectives that should be a focus of appraisal	i.e. answer - <i>What has Plan-making / SA involved up to this point?</i>	
(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	An outline of the reasons for selecting the alternatives dealt with (i.e. an explanation of the 'reasonableness of the approach)		
(i) a description of the measures envisaged concerning monitoring.	The likely significant effects associated with alternatives, including on issues such as... ... and an outline of the reasons for selecting the preferred approach in light of the alternatives considered / a description of how environmental objectives and considerations are reflected in the draft plan.		
	The likely significant effects associated with the draft plan	i.e. answer - <i>What are the appraisal findings at this current stage?</i>	
	The measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects of implementing the draft plan		
	A description of the measures envisaged concerning monitoring	i.e. answer - <i>What happens next?</i>	

APPENDIX II: ALTERNATIVES APPRAISAL (MAKING PROVISION FOR SEPARATE LANDBANKS FOR SHARP SAND AND GRAVEL AND SOFT SAND)

Introduction

As described within Part 2 of the main SA Report document, an interim stage of plan-making / SA involved appraising the following alternatives:

- 1 To not 'split' the apportionment for sand and gravel, keeping it as one amalgamated figure.
- 2 To 'split' the apportionment at 40% soft sand and 60% sharp sand and gravel (based on recent sales data).
- 3 To 'split' the apportionment at a different percentage which takes into account the availability of alternative sources (substitutes) for sharp sand and gravel including marine dredged aggregates, imported hard rock and recycled aggregates.

The appraisal findings are presented in full within this Appendix. The appraisal table should be read alongside the corresponding section of Part 2, where an explanation can be found of the degree to which the preferred approach - as set out in the 'Submission' version of the Plan reflects appraisal findings.

Methodology

For each of the options, the assessment identifies and evaluates 'likely significant effects' on the baseline, drawing on the sustainability topics / objectives identified through scoping (see Part 1) as a methodological framework. **Red** text / shading is used to indicate significant negative effects, whilst **green** text / shading is used to indicate significant positive effects.

Effects are predicted taking into account the criteria presented within Regulations.⁷³ So, for example, account is taken of the duration, frequency and reversibility of effects as far as possible. Effects are described in terms of these criteria within the assessment as appropriate. The potential for 'cumulative' effects is also a consideration.

Every effort is made to predict effects accurately; however, this is inherently challenging given the high level nature of the options. The ability to predict effects accurately is also limited by understanding of the baseline (now and in the future under a 'no plan' scenario). In light of this, there is a need to make considerable assumptions regarding how the options will be implemented 'on the ground' and what the effect on particular receptors will be. Where there is a need to rely on assumptions, this is made explicit in the appraisal text.⁷⁴

In many instances, given reasonable assumptions, it is not possible to predict likely significant effects, but it is possible to comment on the relative merits of the alternatives in more general terms and to indicate a **rank of preference**. This is helpful, as it enables a distinction to be made between the alternatives even where it is not possible to distinguish between them in terms of 'significant effects'.


⁷³ Schedule 1 of the Environmental Assessment of Plans and Programmes Regulations 2004

⁷⁴ It is worth noting that, as stated by Government Guidance (The Plan Making Manual, see <http://www.pas.gov.uk/pas/core/page.do?pagelid=156210>): "Ultimately, the significance of an effect is a matter of judgment and should require no more than a clear and reasonable justification."

Appraisal findings


Table presenting an appraisal of the following site options:

- (1) To not 'split' the apportionment for sand and gravel, keeping it as one amalgamated figure.
- (2) To split the apportionment at 40% soft sand and 60% sharp sand and gravel (based on recent sales data).
- (3) To split the apportionment at a different percentage which takes into account the availability of alternative sources (substitutes) for sharp sand and gravel including marine dredged aggregates, imported hard rock and recycled aggregates.

Sustainability topic / objective(s)	Discussion of <u>significant effects</u> (and discussion of <u>relative merits</u> in more general terms)	Rank of preference		
		Opt 1	Opt 2	Opt 3
Biodiversity <ul style="list-style-type: none"> • Ensure that development will not impact on important elements of the biodiversity resource and where possible contributes to the achievement of the Kent Biodiversity Action Plan and other strategies 	<p>There are potentially notable implications for biodiversity, given that sources of sharp sand and gravel in Kent have been concentrated in the areas where flints derived from the chalk have been deposited by river and marine action. These were the three main river valleys of the Darent, Medway and Stour, and the beach deposits along the coast (particularly at Dungeness).</p> <p>Environmental groups (Kent Wildlife Trust, CPRE Protect Ken) and Kent Downs AONB) have stated their support for an approach that involves making separate provision for sharp sand through the plan. Kent Downs AONB have stated that – <i>'It is accepted that the ration of 40%/60% split may well change over the plan period with a shift towards a higher percentage of soft sand. However given the present shortfall in the sharp sand and gravel element it would appear misguided... to ignore the high demand for sharp sand a gravel element... in the early years of the plan [as] this could lead to a shortfall and pressures on unallocated sites later in the plan period.'</i></p> <p>In-line with the above discussion, it could be suggested that not splitting the requirement (Option 1) could lead to less certainty regarding where extraction will occur in the future and hence significant negative effects.</p> <p>However, there is a counter argument that the ratio of land won sharp sand and gravel to soft sand is likely to change over the plan period (as some of the traditional areas of sharp sand and gravel working in the County reduce outputs), and so it would not be helpful to specify a split. In other words, not specifying a split will enable flexibility and hence support a gradual shift away from the extraction of sharp sand and gravel from land and a move towards <i>imports of marine dredged aggregates and recycled aggregates.</i></p> <p>On balance, it is suggested that Option 1 is the least preferable option, but the uncertainty</p>	3		2

Sustainability topic / objective(s)	Discussion of <u>significant effects</u> (and discussion of <u>relative merits</u> in more general terms)	Rank of preference		
		Opt 1	Opt 2	Opt 3
	involved means that it is not possible to conclude a likely significant effect. In terms of the relative merits of Option 2 and Option 3 , it is possible to conclude that Option 3 is preferable on the basis that assumptions regarding importation could prove to be false, resulting in under provision and hence a shortfall and pressures on unallocated sites later in the plan period.			
Climate change <ul style="list-style-type: none"> Address the causes of climate change through reducing emissions of greenhouse gases through energy efficiency and energy generated from renewable sources 	The choice between Option 1 and Option 2 does not lead to any notable implications. In terms of Option 3 , it is not clear that taking into account the availability of alternative sources (substitutes) for sharp sand and gravel (including marine dredged aggregates, imported hard rock and recycled aggregates) when making provision for site allocations will necessarily have the effect of ensuring that a smaller proportion of the required mineral resource comes from new land-won sources. If this were to be the case, however, then there would be positive implications for climate change mitigation as a result of a reduced need to transport minerals by road.	-	-	-
Community and well-being <ul style="list-style-type: none"> Support efforts to create and sustain sustainable communities, particularly the improvement of health and well-being Support the delivery of housing targets 	The choice between Option 1 and Option 2 does not lead to any notable implications. Minerals development can clearly have negative implications for nearby communities and hence the location of extraction is of great importance; however, the location of minerals sites in relation to sensitive community receptors will primarily be determined through the Mineral Sites Plan. In terms of Option 3 , it is not clear that taking into account the availability of alternative sources (substitutes) for sharp sand and gravel (including marine dredged aggregates, imported hard rock and recycled aggregates) when making provision for site allocations will necessarily have the effect of ensuring that a smaller proportion of the required mineral resource comes from new land-won sources. If this were to be the case, however, then there would be positive implications for communities and well-being as a result of a reduced need to transport minerals by road. The transport of minerals by heavy good vehicle can have negative implications for health and amenity. Policy CSM10 - Sustainable transport of minerals - promotes new wharf and railhead importation operations (in order to encourage minerals entering the County by sea and rail, rather than by road) so long as they are well located in relation to the Key Arterial Routes.	-	-	-

Sustainability topic / objective(s)	Discussion of <u>significant effects</u> (and discussion of <u>relative merits</u> in more general terms)	Rank of preference		
		Opt 1	Opt 2	Opt 3
Sustainable economic growth <ul style="list-style-type: none"> Support economic growth and diversification 	<p>Option 1 should ensure that there is sufficient headroom in the sand and gravel site allocations, i.e. ensure capacity to accommodate potentially large increases in demand during the plan period. Splitting the land bank could potentially lead to an under-supply of soft sand. Kent's soft sand reserves extracted from the Folkestone Beds continue to be important for mortar and asphalt production. Soft sand supplies in Kent are relatively abundant, whereas they are scarce in other parts of the South East of England.</p> <p>As such, Option 1 is the best performing option. It is in-line with new CLG guidance (Dec 2012) identifies that separate landbank for different types of aggregates may be made, but they are not mandatory. This guidance recognises the importance of flexibility / not imposing undue regulatory burden.</p> <p>It is not clear that any 'significant' effect is likely, however. It is not clear that there is any discernible difference between Option 2 and Option 3 in terms of this objective.</p>	★ 1	2	2
Flood risk <ul style="list-style-type: none"> Reduce the risk of flooding and the resulting detriment to public wellbeing, the economy and the environment 	No implications	-	-	-
Land <ul style="list-style-type: none"> Make efficient use of land and avoid sensitive locations 	<p>The choice between Option 1 and Option 2 does not lead to any notable implications.</p> <p>In terms of Option 3, it is not clear that taking into account the availability of alternative sources (substitutes) for sharp sand and gravel (including marine dredged aggregates, imported hard rock and recycled aggregates) when making provision for site allocations will necessarily have the effect of ensuring that a smaller proportion of the required mineral resource comes from new land-won sources.</p>	-	-	-
Landscape and the historic environment <ul style="list-style-type: none"> Protect and enhance Kent's countryside and historic environment 	<p>It is fair to assume that those parts of the Country that are sensitive in terms of biodiversity (see discussion above) are also relatively sensitive in terms of landscape considerations.</p> <p>Hence, the relative performance of the options in terms of this objective is judged to be the same as for the 'biodiversity' related objective. Any effects negative effects associated with Option 1 will be less likely than is the case for biodiversity. As such, it is not possible to conclude that significant effects are likely.</p>	3	★ 1	2

Sustainability topic / objective(s)	Discussion of <u>significant effects</u> (and discussion of <u>relative merits</u> in more general terms)	Rank of preference		
		Opt 1	Opt 2	Opt 3
Transport <ul style="list-style-type: none"> Reduce and minimise unsustainable transport patterns and facilitate the transport of minerals and waste by the most sustainable modes possible 	The implications of the options in terms of ‘sustainable transport’ (i.e. modes other than by road) are discussed above, under the ‘climate change mitigation’ and ‘community and well-being’ topics.	-	-	-
Water <ul style="list-style-type: none"> Maintain and improve the water quality of the Kent’s rivers, ground waters and coasts, and achieve sustainable water resources management 	Dungeness, an area that has traditionally been the focus of sharp sand extraction, is ‘sensitive’ from a water quality perspective (surface and groundwater). The same can probably be said for the river valleys where sharp sand is found. Hence, the relative performance of the options in terms of this objective is judged to be the same as for the ‘biodiversity’ related objective. Any effects negative effects associated with Option 1 will be less likely than is the case for biodiversity. As such, it is not possible to conclude that significant effects are likely.	3	 1	2
Summary In terms of biodiversity, landscape and water related SA objectives, the appraisal concludes that Option 1 may perform least well. There are perhaps the greatest concerns in relation to biodiversity. However, there are considerable uncertainties with this conclusion, and it is not possible to conclude that significant effects are likely. The ‘concern’ relates to the suggestion that not specifying separate landbanks could mean that there is an undersupply of sharp sand and gravel, particularly later in the plan period, which could lead to pressure for planning permission on sites that are unallocated (i.e. have not been identified subsequent to ‘strategic’ consideration through a plan). However, there is a counter argument that the ratio of land won sharp sand and gravel to soft sand is likely to change over the plan period as some of the traditional areas of sharp sand and gravel working in the County reduce outputs, and so it would not be helpful to specify separate landbanks. In other words, not specifying separate landbanks will enable flexibility and hence support a gradual shift away from the extraction of sharp sand and gravel. As land won sharp sand and gravel becomes harder to source, so continuing (or increasing) imports of marine dredged aggregates and recycled aggregates will fill the gap.				

APPENDIX III: ALTERNATIVES APPRAISAL (BRICKEARTH AND CLAY FOR BRICK AND TILE WORKS)

Introduction

As described within Part 2 of the main SA Report document, an interim stage of plan-making / SA involved appraising the following alternatives:

- 1 Maintain a stock of planning permissions at each operational and new brickworks and tileworks to meet national planning policy, providing 25 years of raw materials for production.*
- 2 Identify and allocate further supplies of brickearth to supply works in Kent or those in neighbouring authorities that are reliant upon brickearth supplies from Kent.
- 3 Identify and allocate further supplies of brickearth if they supply brick-works in Kent.

* N.B. Whilst these are the options that were presented in the 'Strategy and Policy Directions' consultation document it is important to note that only (2) and (3) are alternatives, i.e. are mutually exclusive. Option (1) is a suggested approach that could be implemented in combination with (2) or (3). The alternative approach to Option (1) would be to plan not on the basis of past sales data, i.e. on some other basis.

The appraisal findings are presented in full within this Appendix. The appraisal table should be read alongside the corresponding section of Part 2, where an explanation can be found of the degree to which the preferred approach - as set out in the 'Submission' version of the Plan reflects appraisal findings.

Methodology

See discussion within Appendix II.

Appraisal findings

Table presenting an appraisal of the following alternative approaches:

- (1) Maintain a stock of planning permissions at each operational and new brickworks and tileworks to meet national planning policy, providing 25 years of raw materials for production.
- (2) Identify and allocate further supplies of brickearth to supply works in Kent or those in neighbouring authorities that are reliant upon brickearth supplies from Kent.
- (3) Identify and allocate further supplies of brickearth if they supply brick-works in Kent.

Sustainability topic / objective(s)	Discussion of <u>significant effects</u> (and discussion of <u>relative merits</u> in more general terms)	Rank of preference		
		Opt 1	Opt 2	Opt 3
Biodiversity <ul style="list-style-type: none"> 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 	No implications	-	-	-
Climate change <ul style="list-style-type: none"> Address the causes of climate change through reducing emissions of greenhouse gases through energy efficiency and energy generated from renewable sources 	See discussion under 'transport'. Climate change implications are minimal.	-	-	-
Community and well-being <ul style="list-style-type: none"> Support efforts to create and sustain sustainable communities, particularly the improvement of health and well-being Support the delivery of housing targets 	See discussion under 'transport'. Community and well-being implications are minimal.	-	-	-
Sustainable economic growth <ul style="list-style-type: none"> Support economic growth and diversification 	Option 2 – which would involve securing future supplies of brickearth not only for brickworks in Kent, but also those in neighbouring authorities that are reliant on brickearth supplies from Kent - performs well in terms of the 'sustainable economic growth and diversification' objective. Such is the limited occurrence of brickearth geologically and geographically that to	?		2

Sustainability topic / objective(s)	Discussion of <u>significant effects</u> (and discussion of <u>relative merits</u> in more general terms)	Rank of preference		
		Opt 1	Opt 2	Opt 3
	<p>attempt to artificially regulate supply by reference to past sales or to limit supplies for Kent based manufacture would serve only to suppress supply and, potentially, undermine the long term viability of brick manufacture in the County. There is the potential for significant effects, albeit of limited scale.</p> <p>In terms of clay (some types of which are also used for brick manufacture), it is the Council's view that the stock of planning permissions is sufficient to cover any eventuality (i.e. to cover a situation whereby any of the dormant or closed brickworks re-opened or new brick works are established) and so the Mineral Sites Plan should not identify further sites. This approach reflects the NPPF requirement that MPAs maintain and enhance the diversity of brick clay available by making appropriate provision for their supply and take account of the need for provision of brick clay from a number of different sources to enable appropriate blends to be made. There are no operational brickworks remaining which use clay in the county although there is one tile manufacturer which makes Kent Peg tiles, which has sufficient reserves for the plan period.</p> <p>The preferred approach could ensure that minerals are ready and available to support the changing economy as brick and tile demand fluctuates. However, it has been suggested that correlating past sales together with past house building levels and other non-residential construction that use brickearth and clay brick as a starting point and using future projected housebuilding levels and other non-residential construction should provide a more accurate position than just simply using past sales on their own, i.e. would give greater clarity in terms of estimating future demand. As such, option one is assigned an 'uncertain' score.</p>			
Flood risk <ul style="list-style-type: none"> Reduce the risk of flooding and the resulting detriment to public wellbeing, the economy and the environment 	No implications	-	-	-
Land <ul style="list-style-type: none"> Make efficient use of land and avoid sensitive locations 	No implications	-	-	-
Landscape and the historic environment <ul style="list-style-type: none"> Protect and enhance Kent's countryside 	From a 'historic environment' perspective, brick-works should be supported where they produce vernacular bricks that are used to enhance local distinctiveness and built character.	-	1	2

Sustainability topic / objective(s)	Discussion of <u>significant effects</u> (and discussion of <u>relative merits</u> in more general terms)	Rank of preference		
		Opt 1	Opt 2	Opt 3
and historic environment	There is nothing to suggest that brick-works in East Sussex are less likely to meet this criterion than brickworks in Kent. There is the potential for significant effects at the Kent scale.			
Transport <ul style="list-style-type: none"> Reduce and minimise unsustainable transport patterns and facilitate the transport of minerals and waste by the most sustainable modes possible 	Option 2 - whereby future supplies of brickearth should be maintained not only for brickworks in Kent, but also those in neighbouring authorities that are reliant on brickearth supplies from Kent – may appear to go against the proximity principle somewhat; however, in practice this is probably not the case given the limited occurrence of brickearth geologically and geographically. It is fair to assume that transport economics will ensure that brickearth production and usage tends to occur at the nearest point to sources of brickearth supply. Furthermore, it is the case that the working and transportation of brickearth from Kent to the brickworks in East Sussex, is a small scale operation, which is carried out on an infrequent basis.	-	2	★ 1
Water <ul style="list-style-type: none"> Maintain and improve the water quality of the Kent's rivers, ground waters and coasts, and achieve sustainable water resources management 	No implications	-	-	-

Summary

Option 2 would involve identifying and allocating sites to make provision for future supplies of brickearth to supply works in Kent or those in neighbouring authorities that are reliant on brickearth supplies from Kent. From a sustainability perspective, this approach performs well relative to the alternative approach presented, which would involve only identifying reserves of brickearth in Kent if they supply brick making facilities within Kent. Although there is a need to minimise transport distances, the small scale nature of transport in this instance means that this is not a significant consideration. Furthermore, it is fair to assume that transport economics will ensure that brickearth production and usage tends to occur at the nearest point to sources of brickearth supply. Another important consideration is that brick-works should be supported where they produce vernacular bricks that are used to enhance local distinctiveness and built character. There is nothing to suggest that brick-works in East Sussex are less likely to meet this criterion than brickworks in Kent.

APPENDIX IV: ALTERNATIVES APPRAISAL (PROVISION FOR MUNICIPAL SOLID WASTE)

Introduction

As described within Part 2 of the main SA Report document, an interim stage of plan-making / SA involved appraising the following alternatives:

- 1 Use high growth forecasts to identify sufficient sites with a view to ensuring flexibility during the plan period
- 2 Use low growth forecasts (based upon Kent County Council's own waste Management Unit's forecasts)

The appraisal findings are presented in full within this Appendix. The appraisal table should be read alongside the corresponding section of Part 2, where an explanation can be found of the degree to which the preferred approach - as set out in the 'Submission' version of the Plan reflects appraisal findings.

Methodology

See discussion within Appendix II.

Appraisal findings

Table presenting an appraisal of the following alternative approaches:

- (1) Use high growth forecasts to identify sufficient sites with a view to ensuring flexibility during the plan period
- (2) Use low growth forecasts (based upon Kent County Council's own waste Management Unit's forecasts)

Sustainability topic / objective(s)	Discussion of <u>significant effects</u> (and discussion of <u>relative merits</u> in more general terms)	Rank of preference	
		Opt 1	Opt 2
Biodiversity <ul style="list-style-type: none"> 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 	No implications	-	-
Climate change <ul style="list-style-type: none"> Address the causes of climate change through reducing emissions of 	Greater flexibility could potentially ensure that sites are available to ensure that waste is managed 'up the waste hierarchy'; however, in practice it is recognised that Kent is well served by facilities for managing MSW and the changes required for MSW management during the plan period should	★ 1	2

Sustainability topic / objective(s)	Discussion of <u>significant effects</u> (and discussion of <u>relative merits</u> in more general terms)	Rank of preference	
		Opt 1	Opt 2
greenhouse gases through energy efficiency and energy generated from renewable sources	facilitate an increase in recycling in any case (i.e. under Option 1).		
Community and well-being <ul style="list-style-type: none"> Support efforts to create and sustain sustainable communities, particularly the improvement of health and well-being Support the delivery of housing targets 	No implications	-	-
Sustainable economic growth <ul style="list-style-type: none"> Support economic growth and diversification 	Increased flexibility could potentially support competition, which in turn could support economic growth in the long term. However, in the short term there is a need for certainty as to the preferred approach to management of MSW (which to facilitate an increase in recycling and to ensure that residual waste can be bulked up for transportation to the Allington Waste to Energy facility).	★ 1	2
Flood risk <ul style="list-style-type: none"> Reduce the risk of flooding and the resulting detriment to public wellbeing, the economy and the environment 	No implications	-	-
Land <ul style="list-style-type: none"> Make efficient use of land and avoid sensitive locations 	Allocating additional sites where there is little certainty regarding deliverability cannot be considered an efficient use of land	2	★ 1
Landscape and the historic environment <ul style="list-style-type: none"> Protect and enhance Kent's countryside and historic environment 	No implications	-	-
Transport <ul style="list-style-type: none"> Reduce and minimise unsustainable transport patterns and facilitate the transport of minerals and waste by the most sustainable modes possible 	Option 1 should enable sufficient waste management capacity with the effect of ensuring that the proximity principle is strictly adhered to, i.e. waste is managed close to the source of production. It could be argued that planning for a degree of headroom would ensure that this strategy is more full-proof – i.e. would reduce the risk of waste arisings having to be transported outside of Kent – however, it is not expected that this risk is significant given that, in any event, KCC has contracts with	★ 1	★ 1

Sustainability topic / objective(s)	Discussion of <u>significant effects</u> (and discussion of <u>relative merits</u> in more general terms)	<u>Rank of preference</u>	
		Opt 1	Opt 2
	waste management companies for relevant ranges of waste arisings, including contingency arrangements should arisings increase. It is also important to remember that, whilst land supply (i.e. the allocation of sites) does have a bearing on the waste management capacity that can be delivered in Kent it is not the sole determinant. There is considerable scope for operators to choose to utilise sites more or less intensively.		
Water <ul style="list-style-type: none"> Maintain and improve the water quality of the Kent's rivers, ground waters and coasts, and achieve sustainable water resources management 	A key consideration is the degree to which the waste strategy will divert waste away from landfill, given that landfill of non-inert waste has the potential to result in leachate polluting the water environment. If, under Option 1, waste management capacity were to be exceeded	-	-
Summary In theory, there could be some benefit to planning for (i.e. making provision through the allocation of site) greater waste management capacity as the risk of capacity being exceeded (and hence waste having to be transported outside of Kent) would be reduced. However, in practice it is recognised that low growth forecasts (based upon Kent County Council's own waste Management Unit's forecasts) are likely to be accurate, and in any case KCC has contracts with waste management companies for relevant ranges of waste arisings, including contingency arrangements should arisings increase. It is also important to remember that, whilst land supply (i.e. the allocation of sites) does have a bearing on the waste management capacity that can be delivered in Kent it is not the sole determinant. There is considerable scope for operators to choose to utilise sites more or less intensively.			

APPENDIX V: ALTERNATIVES APPRAISAL (LANDFILL SPACE FOR KENT'S NON HAZARDOUS WASTES)

Introduction

As described within Part 2 of the main SA Report document, an interim stage of plan-making / SA involved appraising the following alternatives:

- 1 In order to reduce the amount of non-hazardous waste being sent to landfill (462,000 tonnes of C&I waste in 2008), provide site allocations for substantial additional capacity for EfW (and/or other suitable technologies) for Kent's C&I waste;
- 2 In order to make provision for the current C&I waste stream that is being sent to landfill, identify new landfill sites for the amount of waste estimated to be generated for the duration of the plan (albeit recognising that it is difficult to identify a suitable site for non-hazardous waste disposal in Kent, due to geological and environmental considerations).
- 3 No new landfill void space for non-hazardous waste will be identified in Kent for the plan period. This reflects the fact that there are major consented operational landfills for MSW and C&I waste in Thurrock, Havering and South Essex (where the operators are experiencing reducing volumes of waste being sent for landfill and hence it is likely that sufficient void space would be available for Kent's C&I waste stream for the duration of the plan).

N.B. Whilst these are the options that were presented in the 'Strategy and Policy Directions' consultation document it is important to note that they are not strictly alternatives, i.e. are not entirely mutually exclusive. It is helpful to consider them as alternatives (i.e. consider the relative merits of these options) nonetheless.

The appraisal findings are presented in full within this Appendix. The appraisal table should be read alongside the corresponding section of Part 2, where an explanation can be found of the degree to which the preferred approach - as set out in the 'Submission' version of the Plan reflects appraisal findings.

Methodology

See discussion within Appendix II.

Appraisal findings

Table presenting an appraisal of the following alternative approaches:

- (1) In order to reduce the amount of non-hazardous waste being sent to landfill (462,000 tonnes of C&I waste in 2008), provide site allocations for substantial additional capacity for EfW (and/or other suitable technologies) for Kent's C&I waste;
- (2) In order to make provision for the current C&I waste stream that is being sent to landfill, identify new landfill sites for the amount of waste estimated to be generated for the duration of the plan (albeit recognising that it is difficult to identify a suitable site for non-hazardous waste disposal in Kent, due to geological and environmental considerations).
- (3) No new landfill void space for non-hazardous waste will be identified in Kent for the plan period. This reflects the fact that there are major consented operational landfills for MSW and C&I waste in Thurrock, Havering and South Essex (where the operators are experiencing reducing volumes of waste being sent for landfill and hence it is likely that sufficient void space would be available for Kent's C&I waste stream for the duration of the plan).

Sustainability topic / objective(s)	Discussion of <u>significant effects</u> (and discussion of <u>relative merits</u> in more general terms)	Rank of preference		
		Opt 1	Opt 2	Opt 3
Biodiversity <ul style="list-style-type: none"> 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 	No implications	-	-	-
Climate change <ul style="list-style-type: none"> Address the causes of climate change through reducing emissions of greenhouse gases through energy efficiency and energy generated from renewable sources 	It is not expected that any option will result in notable implications for greenhouse gas emissions / climate change mitigation. Option 1 would involve making provision for new EfW facilities so that there is sufficient EfW capacity to handle the amount of C&I waste which has been sent to landfill in the recent past. Whilst EfW is better than landfill in terms of the waste hierarchy, it is not 'at the top' of the hierarchy. As such, it is proposed that policy is set that requires the production of both heat and power and restricts the capacity of EfW which will be permitted to a maximum of 437,000 tonnes. The 'capping' of EfW will have the effect of ensuring that recycling and composting operations, which are more preferable in terms of the waste hierarchy, are encouraged wherever possible.	-	-	-
Community and well-being <ul style="list-style-type: none"> Support efforts to create and sustain 	No implications	-	-	-

Sustainability topic / objective(s)	Discussion of <u>significant effects</u> (and discussion of <u>relative merits</u> in more general terms)	Rank of preference		
		Opt 1	Opt 2	Opt 3
sustainable communities, particularly the improvement of health and well-being <ul style="list-style-type: none"> Support the delivery of housing targets 				
Sustainable economic growth <ul style="list-style-type: none"> Support economic growth and diversification 	No implications	-	-	-
Flood risk <ul style="list-style-type: none"> Reduce the risk of flooding and the resulting detriment to public wellbeing, the economy and the environment 	No implications	-	-	-
Land <ul style="list-style-type: none"> Make efficient use of land and avoid sensitive locations 	No implications	-	-	-
Landscape and the historic environment <ul style="list-style-type: none"> Protect and enhance Kent's countryside and historic environment 	No implications	-	-	-
Transport <ul style="list-style-type: none"> Reduce and minimise unsustainable transport patterns and facilitate the transport of minerals and waste by the most sustainable modes possible 	Self-sufficiency is important and, as such, Options 1 and 2 are preferable to Option 3. However, it is recognised that there can be a pragmatic need for waste to be transported across administrative boundaries given that existing constraints across the region (e.g. geology, environmental designations, transport connections, population distribution) mean some areas are better placed to make a contribution to the management of particular waste streams than others. The need for cross boundary movement of waste can be particularly pertinent for landfill waste. The development of the Waste and Minerals Core Strategy in East Sussex has revealed that there are very few opportunities for landfill in the short to medium term and it is therefore possible that residual waste may need to be exported to Kent (and other locations) for management. Transferring landfill waste across County borders (from East Sussex to Kent, or from Kent to South Essex as is muted under Option 3 given that the Thames Gateway growth area straddles the two Counties) can arguably be in-line with the proximity principle, but would go against the goal of achieving self-sufficiency.	★ 1	★ 1	?

Sustainability topic / objective(s)	Discussion of <u>significant effects</u> (and discussion of <u>relative merits</u> in more general terms)	Rank of preference		
		Opt 1	Opt 2	Opt 3
Water <ul style="list-style-type: none"> Maintain and improve the water quality of the Kent's rivers, ground waters and coasts, and achieve sustainable water resources management 	A key consideration is the degree to which the waste strategy will divert waste away from landfill, given that landfill of non-inert waste has the potential to result in leachate polluting the water environment. On this basis, Option 1 is preferable. However, Option 1 would encourage Energy from Waste despite this leading to the production of hazardous flue ash as a by-product, which then needs to be landfilled, potentially leading to risks to water quality.		2	2
Summary Option 1 performs best on the basis that no new landfill void space for non-hazardous waste will be identified. This is a key consideration from a 'water' perspective. There will be a need to landfill the hazardous flue ashes that result from managing non-hazardous waste and Energy from Waste (EfW) facilities; however, the quantities involved will be relatively small. The alternative approach would involve accepting that there is a need to make provision for a continuation of the current level of C&I waste that is being sent to landfill, and identifying further new sites accordingly. Option 2 would involve seeking to find an appropriate site within Kent; whilst Option 3 would accept that a more suitable site could be found in Essex. Option 3 would probably be preferable on the basis of the proximity of the two Counties (i.e. given that the Thames Gateway straddles the Counties).				