Kent Minerals and Waste Development Framework

Planning for the future of minerals and waste in Kent






Minerals and Waste Core Strategy

Issues Consultation

September 2010

Kent County Council

Contents

Contents

Contents

Contents

1 Introduction

What is the purpose of the Kent Minerals & Waste Core Strategy?

1.0.1 The Kent Minerals and Waste Core Strategy (the Core Strategy) is a development plan document (plan) that will provide the strategic planning framework for future minerals and waste development. In particular it will identify broad areas where new waste management facilities and mineral extraction sites are to be located. It will also safeguard mineral resources and mineral importation facilities at wharves and rail-sidings. The Core Strategy must make provision for minerals and waste needs for the county up to the end of 2030.

Which Parts of Kent will the Core Strategy Cover?

1.0.2 The Core Strategy will cover the whole of the county of Kent (excluding Medway which is a Unitary Authority and has to prepare its own Core Strategy).

What is the Purpose of this Consultation Document?

1.0.3 This document provides an opportunity for everyone who is interested in how Kent provides for its future mineral supply requirements and how it manages and treats its waste arisings, to consider issues and possible options for the Core Strategy and to have an input into it.

1.0.4 It is the first stage in a three stage consultation process. The next stage will give details of the 'Preferred Options' for the County, having taken into consideration the need for minerals and waste developments, environmental and other constraints and responses to this current consultation.

1.0.5 This consultation also provides opportunities for you to give your views on options for strategic sites for minerals and waste.

How Can You Contribute?

1.0.6 We want to receive your comments in relation to the questions raised in this document regarding planning for future minerals and waste developments in Kent.

1.0.7 We would be pleased to receive your responses to the questions set out in this document by **17.00 on Friday 19th November 2010.**

1.0.8 If you only wish to comment on a part of the document, just ignore the questions on subjects that you are not interested in. Your views, however short are welcomed!

1.0.9 Our preferred method of response is through our web-based consultation system.[1] If you prefer, you can respond to the questions raised by email: mwdf@kent.gov.uk, or by post to MWDF Project Team, Integrated Strategy and Planning, Environment Highways and Waste Directorate, Invicta House, County Hall, Maidstone, Kent ME14 1XX.

1.0.10 If you wish to discuss anything in this report, the Kent M&WDF Project Team can be contacted on 01622 221602, or by fax on: 01622 221635.

1.0.11 This report has been drafted with the knowledge that the Secretary of State for Communities and Local Government, the Rt Hon Eric Pickles MP, has confirmed the revocation of Regional Spatial Strategies. This is detailed in the letter of the 6th July 2010 from the Chief Planner of Communities and Local Government,Steve Quartermain, to the Chief Planning Officers in Local Planning Authorities in England and the accompanying Guidance for Local Planning Authorities.

1.0.12 The guidance accompanying the letter of the 6th July 2010 requires Planning Authorities in the South East to continue to plan for land won aggregates using the quantities set out in the 'Proposed Changes' to the revision of The South East Plan Policy, published on 19th March 2010.

1.0.13 Planning Authorities are also required to press ahead with their waste plans, providing enough land for waste management facilities to support the sustainable management of waste (including the move away from disposal of waste by landfill).

1 http://consult.kent.gov.uk/portal

1 Mineral and Waste Development in Kent - A Spatial Portrait

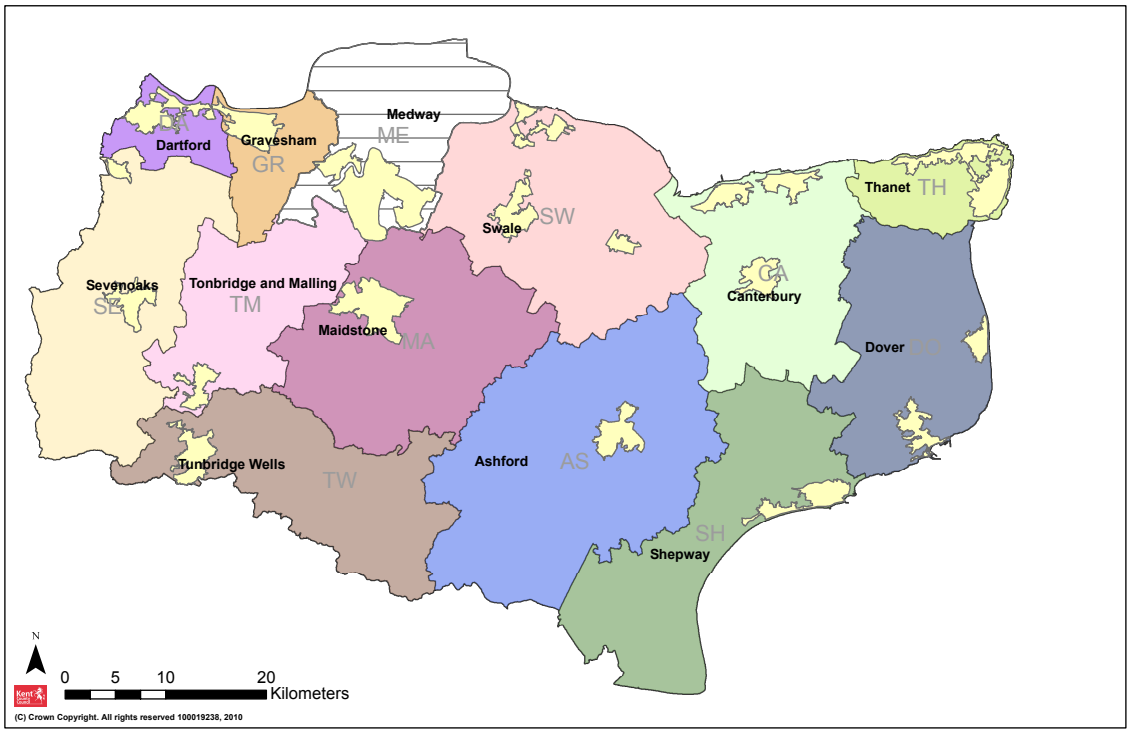
1.1 Introduction

1.1.1 Kent, 'The Garden of England', is unique. It is located in the south east corner of the United Kingdom, surrounded on two sides by water; the River Thames to the north and the English Channel to the south. It also neighbours London on its north-west perimeter. It has excellent communication links by road, rail and water with northern France, London and the rest of the South East region.

1.1.2 With a population of 1.4 million people in 2008, it is the largest non metropolitan local authority area in England. Projected population growth for Kent is a 14.3% increase between 2006 and 2026, taking the total population of the county to 1.58 million people in 2026.

1.1.3 The county consists of 12 districts, as shown on Figure 1:

Figure 1: Kent Districts



Kent Districts

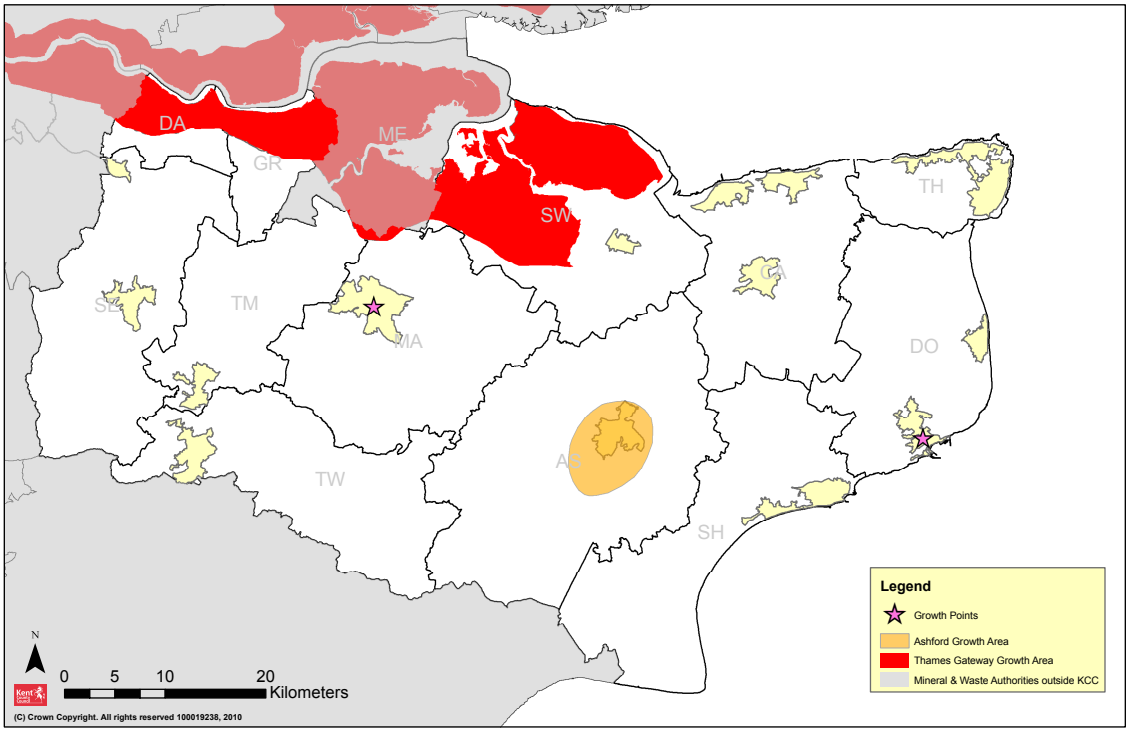
1.1.4 The population of Kent is not evenly spread throughout the county. North-west Kent is the predominant urban area as part of the Thames Gateway Growth Area. There are four growth areas in England, two of which are partially or wholly located in Kent, these are:

- the Ashford Growth Area, and
- the Thames Gateway (which stretches along the River Thames from Stratford and Lewisham in London out to Sittingbourne and Southend in Kent and Essex respectively). Within Kent, it contains parts of Dartford, Gravesham and Swale Districts and the Medway Unitary Authority.

1.1.5 There are also two growth points located within Kent, Maidstone and Dover. Growth points are defined as areas where local authorities can create sustainable growth policies to deliver new housing above their growth targets.

1.1.6 Despite the large urban areas within Kent, the rural areas of Kent are very important too; 85% of the county is defined as rural.

Figure 2: Growth Areas



Growth Areas

1.2 Kent's Environmental and Landscape Assets

1.2.1 Some areas and features of Kent are formally identified as being of national and international importance:

- Areas of Outstanding Natural Beauty; North Downs AONB and High Weald AONB.

- Ramsar Sites and/or Special Areas of Conservation (SACs) and Special Protection Areas (SPAs).[2]
- A World Heritage Site; Canterbury Cathedral.
- National Nature Reserves (NNRs), Sites of Special Scientific Interest (SSSIs), statutorily protected wildlife species; nationally important archaeological sites (most of which are Scheduled), Registered Parks and Gardens of Historic Interest and listed buildings.

1.2.2 Kent's wildlife, geological, geomorphological,[3] landscape and historic environmental areas and features which are of particular importance at County level, or which make a contribution to biodiversity and geological conservation include:

- Local Nature Reserves.
- Local Sites (these are County Wildlife Sites and Regionally Important Geological and Geomorphological Sites).
- Species and Habitats listed as of principle importance for the conservation of biodiversity in the UK (Section 74 of the CROW Act 2000).[4]
- UK lists of priority habitats and species.
- Kent Biodiversity Action Plan species and habitats.[5]
- Listed buildings, Conservation Areas and their settings.
- The setting of the World Heritage Site (Canterbury Cathedral).
- Landscape features of importance for wildlife that are essential for migration, dispersal and which enable the protection, conservation and expansion of native flora and fauna.
- Kentish rivers and their settings.

---

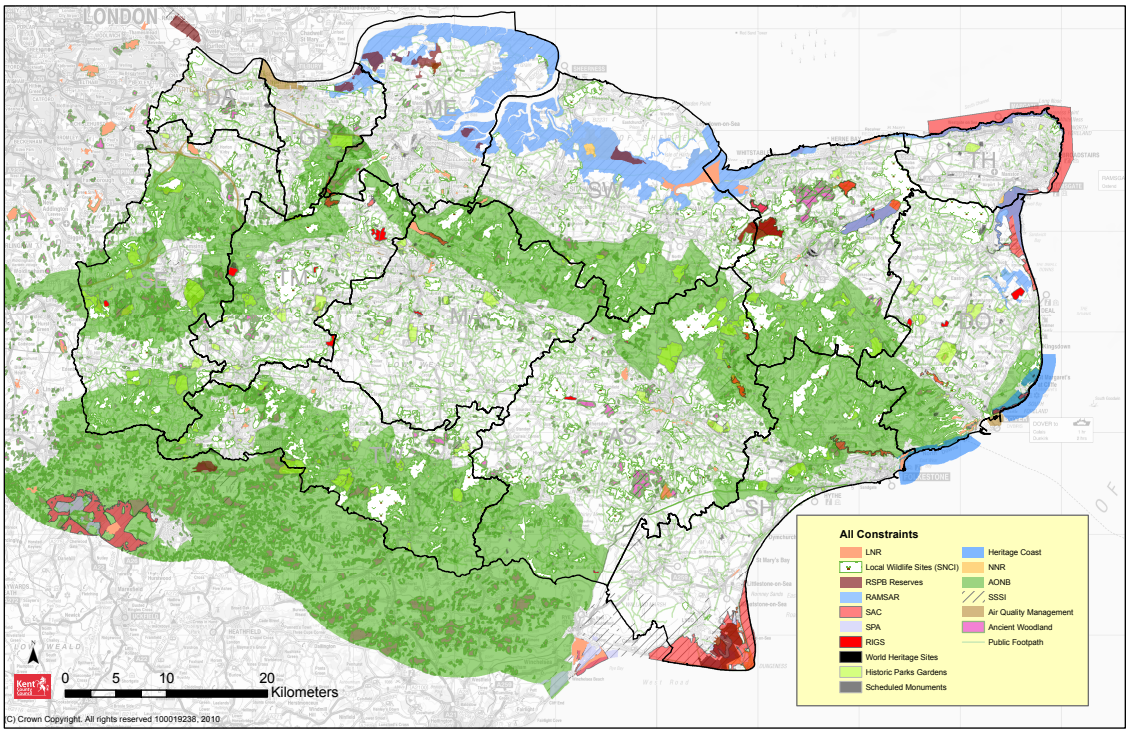
2 RAMSAR sites are sites designated under The Ramsar Convention (The Convention on Wetlands of International Importance, especially as Waterfowl Habitat) which is an international treaty for the conservation and sustainable utilisation of wetlands, i.e. to stem the progressive encroachment on and loss of wetlands.

3 Geomorphology is the scientific study of landforms and the processes that shape them.

4 Countryside and Rights of Way Act 2000.

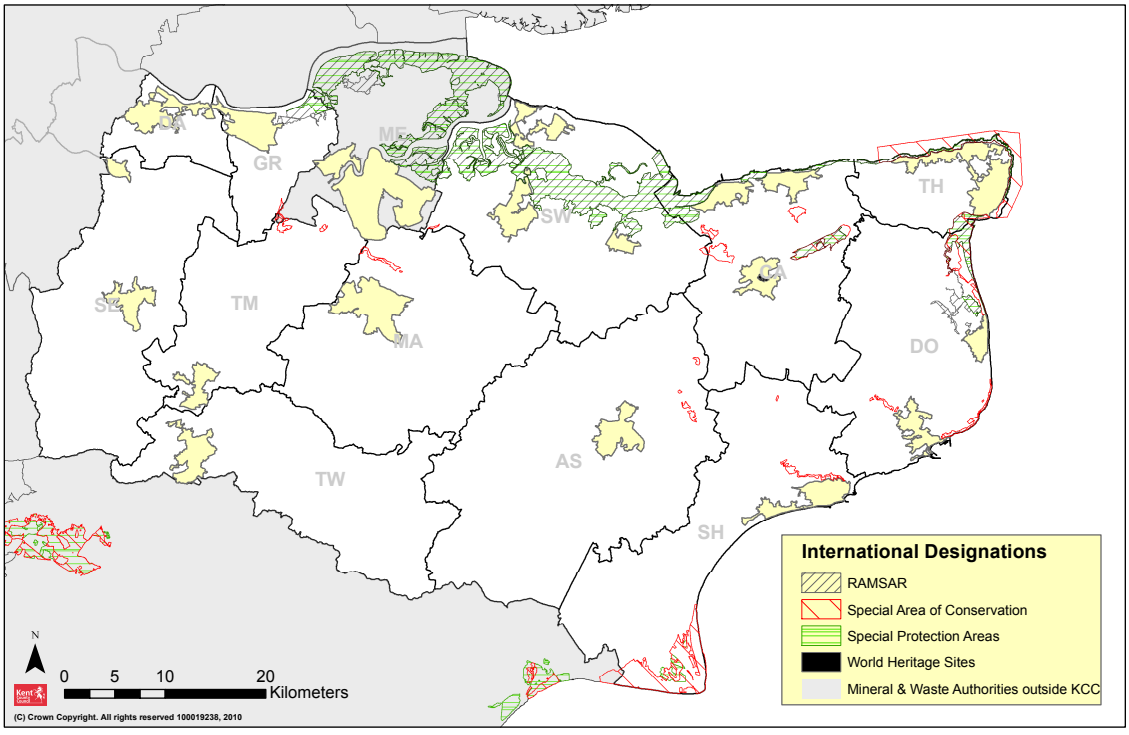
5 www.kentbap.org.uk

Figure 3: All Constraints



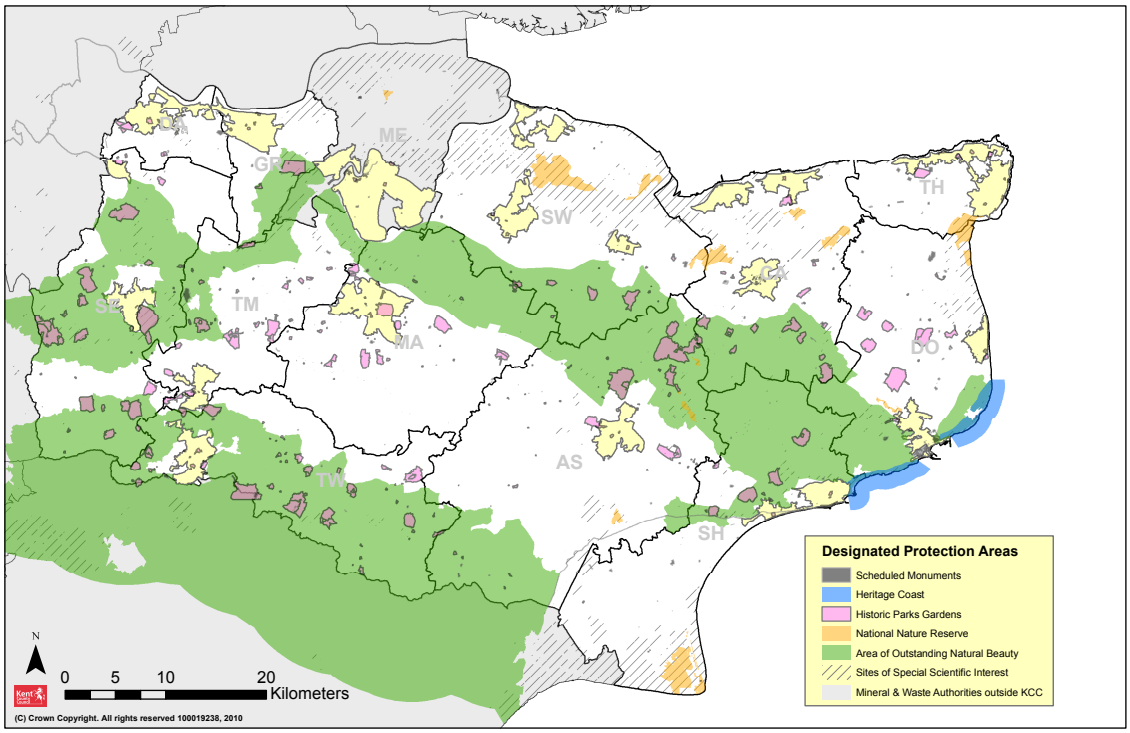
All Constraints

Figure 4: International Designations



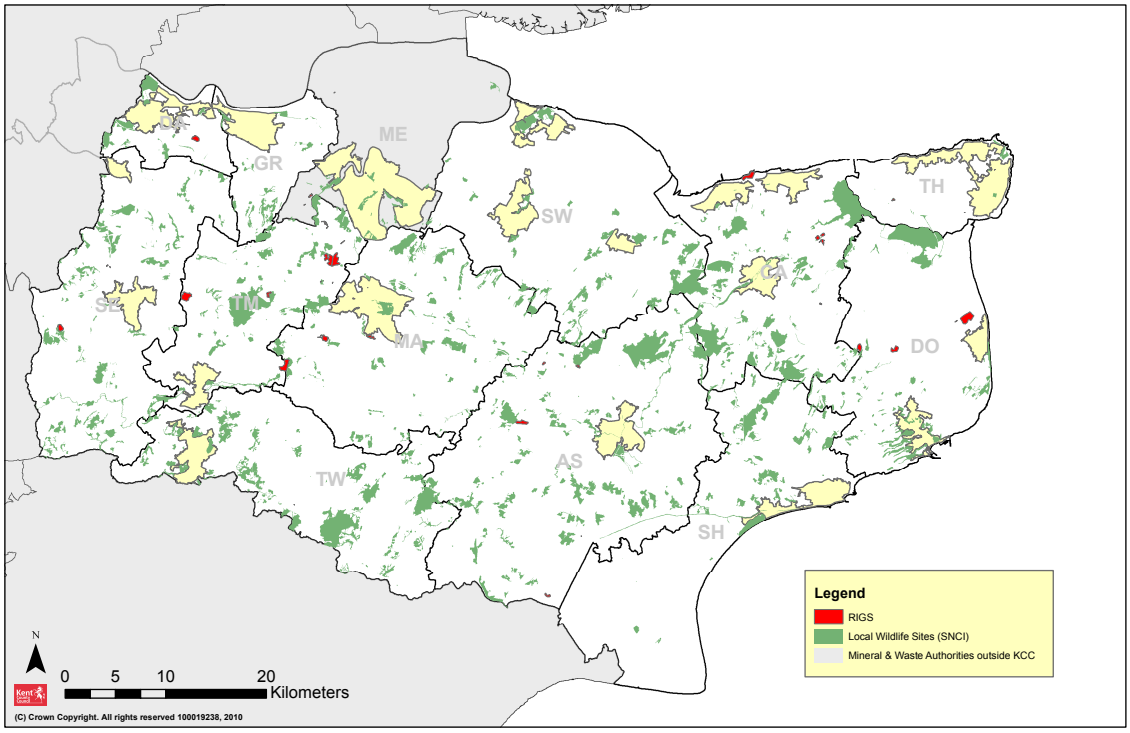
International Constraints

Figure 5: Nationally Important Designations



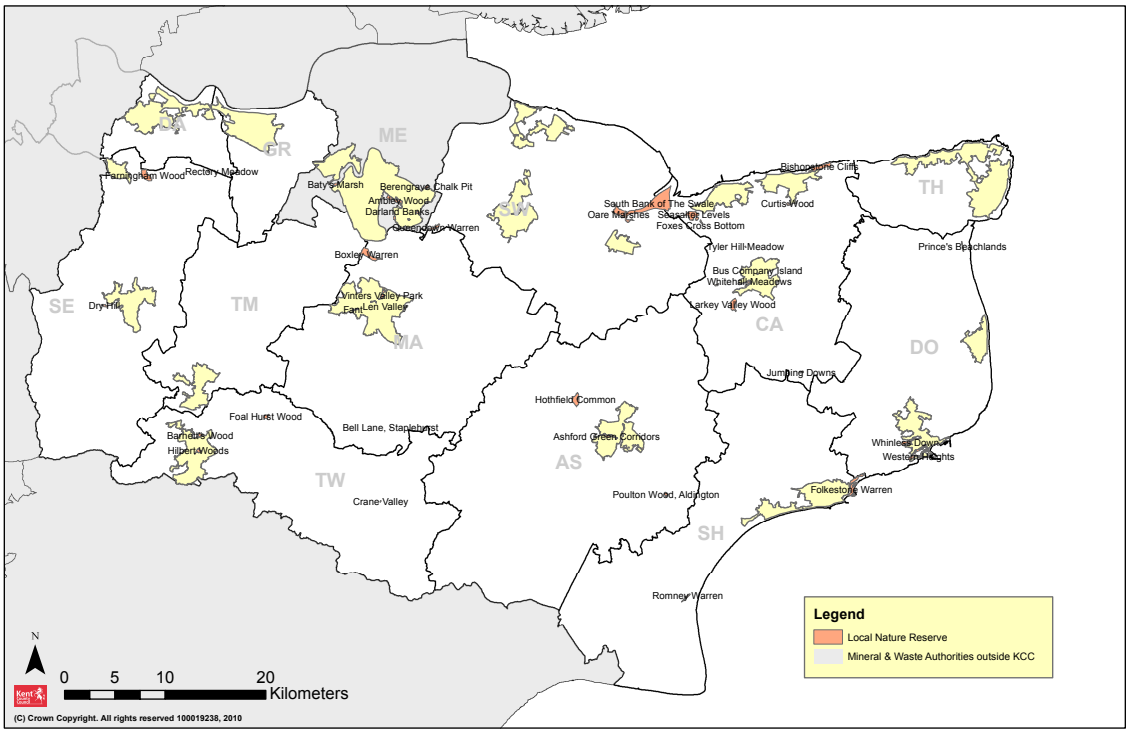
Nationally Important Designations

Figure 6: Local Wildlife Site and Rigs



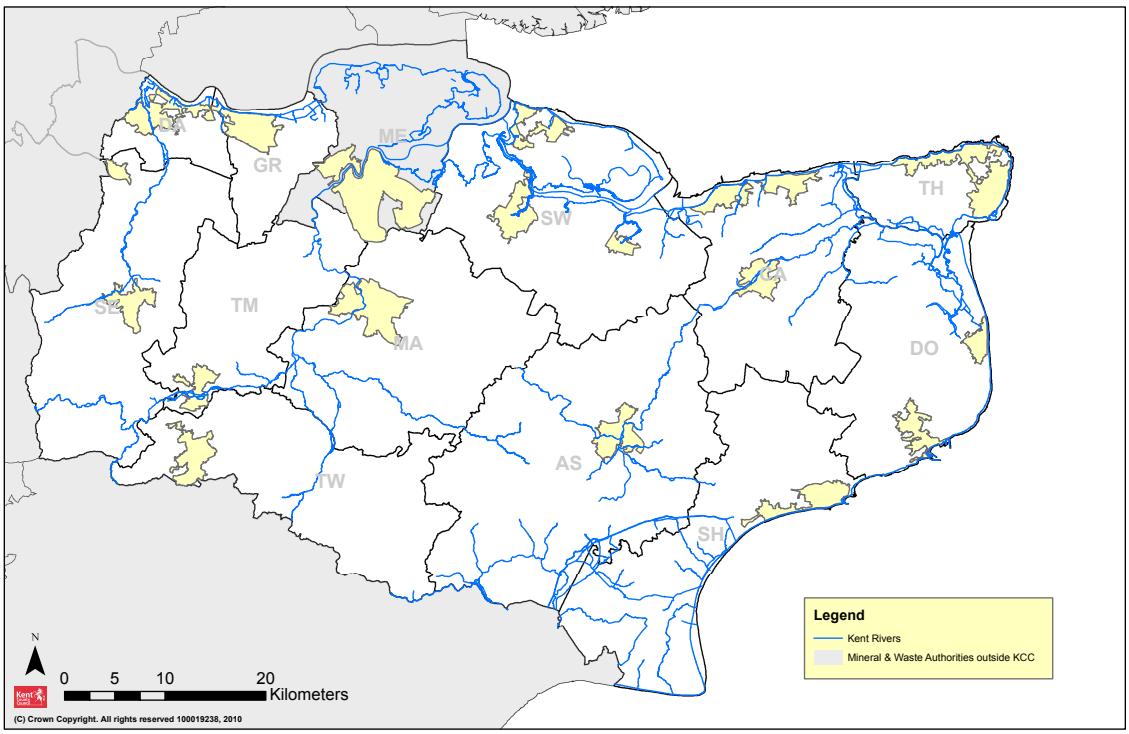
Local Wildlife Sites and RIGS

Figure 7: Local Nature Reserves



Local Nature Reserves

Figure 8: Kent Rivers and Waterways



Rivers and Waterways

1.3 What are the Significant Economic Minerals in Kent?

1.3.1 The economic mineral resources of Kent reflect the complex geological, economic and social history of the area. Historically, the Coal Measures were of major economic importance until all East Kent Coal mines ceased operations by 1989. Until recently, Kent also had a thriving cement industry based on the chalk deposits of the Medway Valley and north-west Kent. There are now no active cement works in Kent, instead cement is imported into the county through a north Kent wharf.

1.3.2 Land-won construction aggregates are now the most economically significant mineral in the County.

1.3.3 Brickearth and clays have been used for brick and tile manufacture in Kent. These industries have declined in modern times. There remain some operational brick and tile works in Kent, although in one case, the brickearth resource is transported to East Sussex for brick manufacture. The Faversham area is the original source of the yellow London Stock bricks. Hand made, Kent peg tiles are also manufactured at a small Weald Clay site south of Maidstone.

1.3.4 Large areas of Kent have also been licensed by Government for petroleum exploration and development, with a further exploration application submitted to Kent County Council which has been approved subject to finalising a S106 legal agreement.

1.3.5 As well as being rich in land-won minerals, Kent handles significant quantities of minerals (construction aggregates and cement) through its wharves and rail depots and is the biggest importer of marine dredged aggregates in the South East region.

1.3.6 Construction aggregates - sand, gravel and crushed rock - are the most significant (in quantity terms) worked and imported into Kent. They are used in the production of concrete and concrete products, mortar and asphalt.

1.3.7 Silica sand ('industrial sand') is recognised as a nationally important mineral[6] and is quarried from the Folkestone Beds (west of Maidstone).[7] Whilst the quality of the silica sand deposits in Kent are not as pure as those found in neighbouring Surrey, some of this material is used for industrial processes including glass manufacture and the production of foundry castings. It is also used in horticulture and for sports surfaces including horse menages and golf course bunker sand. There are no sites in Kent which provide only silica sand, all sites produce construction aggregate to some extent.

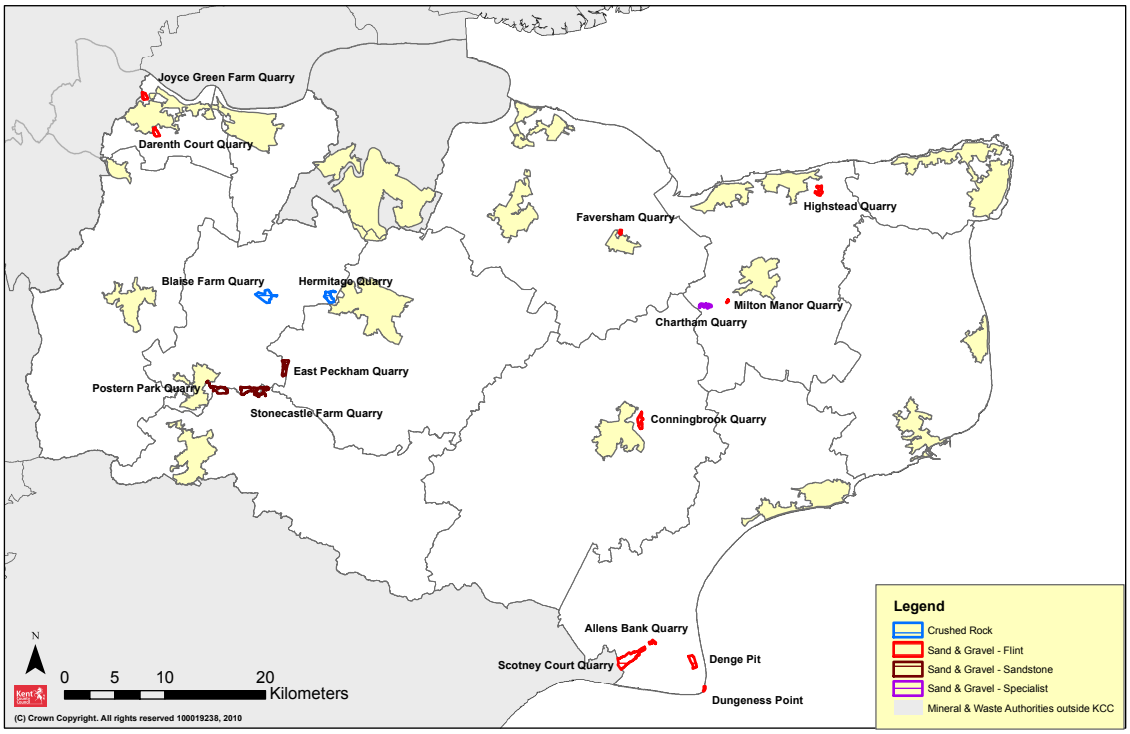
6 Minerals Planning Guidance 15: Provision of Silica Sand in England. Sept 1996, Department for Communities and Local Government.

7 GWP Consultants (March 2010). A study of Silica sand Quality and End Uses in Surrey and Kent. Final Report for Kent County Council.

1.4 Where are Minerals Extracted in Kent?

1.4.1 There are 27 quarries in Kent permitted to extract sand and gravel or soft sand, out of which six are currently dormant. There are also two ragstone quarries in Kent, situated on the Hythe Beds to the west of Maidstone.

Figure 9: Existing land won and crushed rock and sand & gravel sites



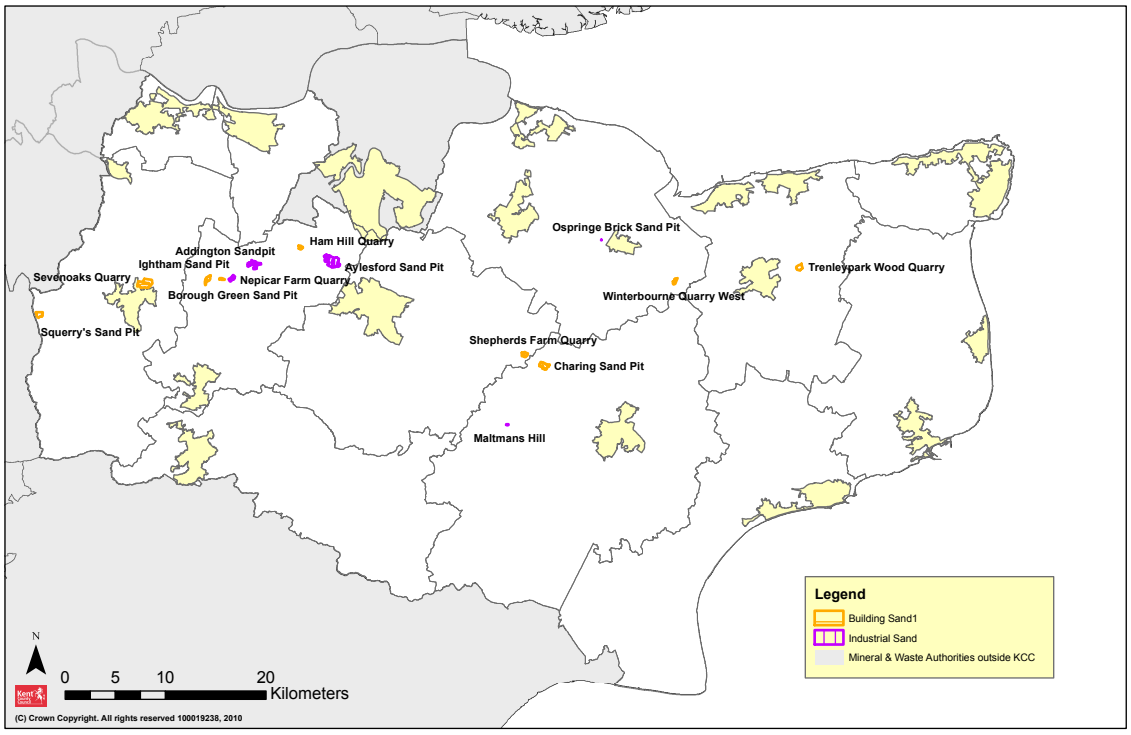
Existing Land-Won Crushed Rock and Sand & Gravel Sites

1.4.2 Historically sharp sand and gravel deposits have been exploited along Kent's river valleys and in the Dungeness/Romney Marsh area. These reserves are to some extent becoming 'worked out' and replacement resources are generally constrained by landscape or nature conservation designations.

1.4.3 Soft sand (building sand) is extracted from seven quarries situated on the Folkestone Beds between Charing and Sevenoaks. Most of these sand quarries produce a combination of soft sand (building sand; a construction aggregate) and specialist sand (silica sand),[8] in varying proportions. Kent does not produce the highest grade of silica sand used in the chemical, glass or ceramic industries, although glass sand has been produced in a number of locations in Kent in the past.

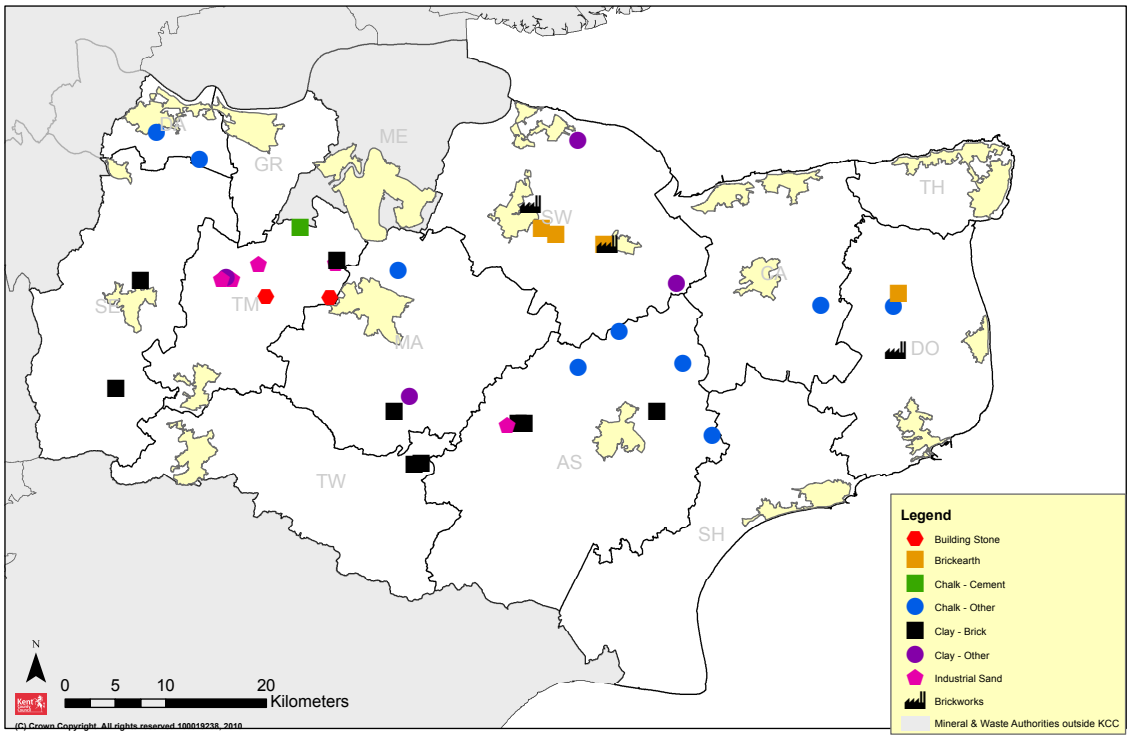
8 Specialist sand (silica sand) includes processed and unprocessed sand marketed for a wide range of specialist end uses. These include 'industrial sand' used for glass, foundry moulds, chemicals, ceramics, aircrete, bricks and tiles, paint, adhesive, grout, roof felt as well as 'non-construction aggregate' sand which is used for equestrian, sports and leisure purposes as well as horticultural sand.

Figure 10: Existing Silica Sand and Building Sand Quarries



Existing Silica Sand and Building Sand Sites

Figure 11: Existing Land-won Other Minerals Sites



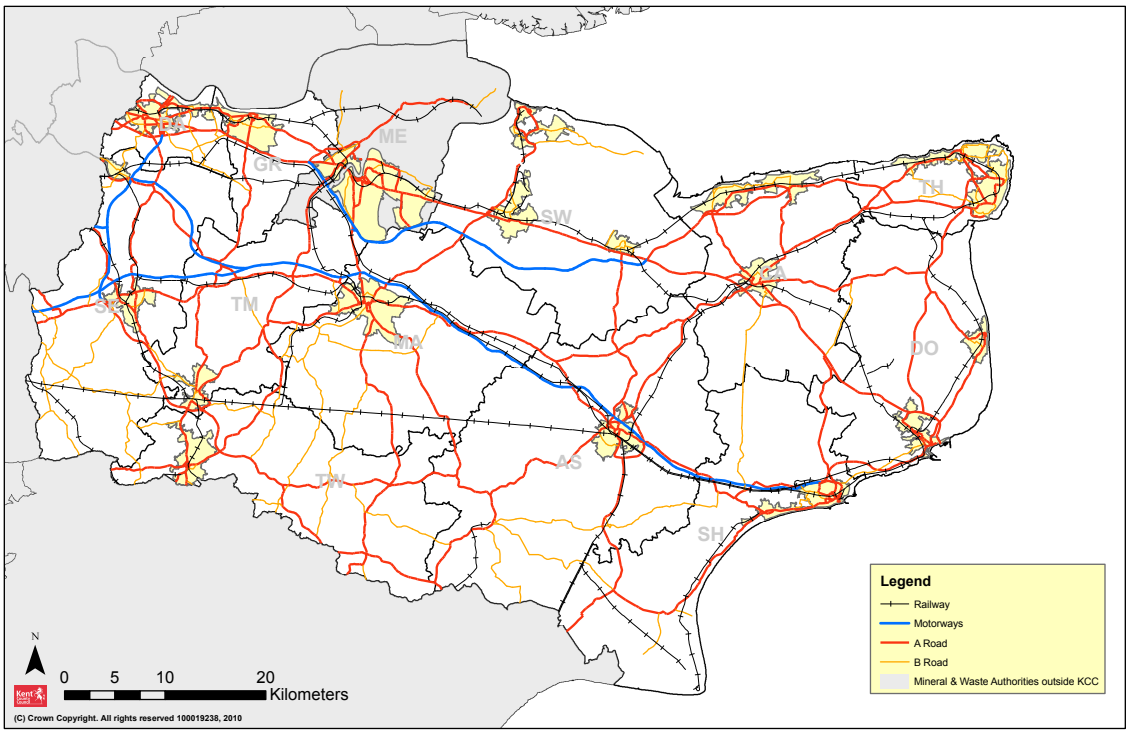
Existing Land Won Other Minerals Extraction Sites

1.4.4 Building stone, required for specialist or conservation building work, has historically been exploited from several different geological formations but is now provided only from the Ragstone quarries of mid Kent. Other types of building stone including Tunbridge Wells Sandstone and Bethersden Paludina Limestone have been worked on a small scale in the past.

1.5 Kent's Waste Infrastructure

1.5.1 Kent has a large population with major urban areas in North Kent, Maidstone and Thanet and smaller towns throughout the county, some of which were established as industrial centres. It is an area of sustained development of housing, employment and infrastructure, and retains important manufacturing industries in addition to the service employment that is prevalent in the South East region. Taken together these features generate large volumes of municipal, commercial and industrial, and construction waste.

Figure 12: Transport Links



Transport Links

1.5.2 The two Growth Areas identified in the national Sustainable Communities Strategy[9] are planned to concentrate the future provision of housing – Ashford with an additional 31,000 homes by 2031[10] and the Kent Thames Gateway, which

9 Office of the Deputy Prime Minister (ODPM) (2003) Sustainable Communities. Building for the Future.

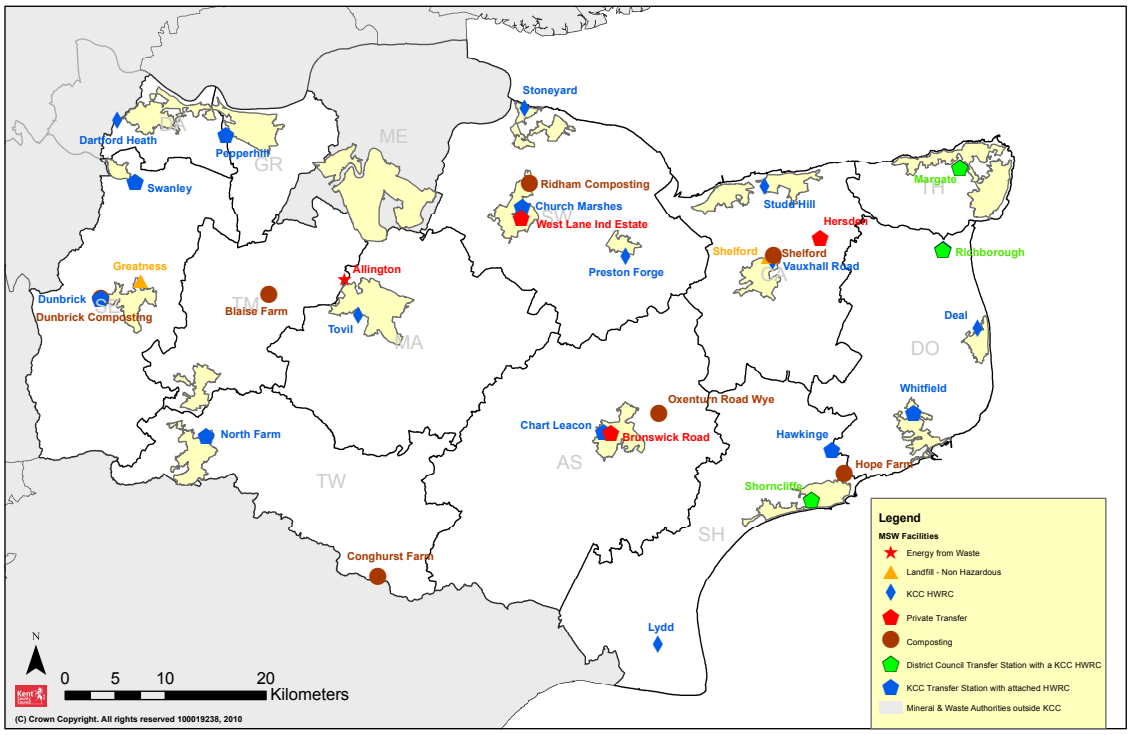
10 Ashford Core Strategy

includes Medway, the urban areas of Dartford and Gravesham and the greater part of Swale, is to provide 48,000 homes by 2026.[11] Aside from the demands of an increasing population, the Growth Areas will generate significant amounts of Construction, Demolition and Excavation (CDE) waste, particularly in the Kent Thames Gateway where a high proportion of the development is taking place on previously developed land.

1.5.3 The district councils as collection authorities influence the rate of recycling of Municipal Solid Waste (MSW) in their areas but the county council, as the disposal and waste planning authority, must achieve targets and apply policies for the area as a whole. The Joint Municipal Waste Management Strategy[12] which provides guidance for the future direction of waste management in Kent will inform the MWDF.

1.5.4 There is variation across the county in the location of existing waste management facilities. North and Mid Kent are relatively well served by facilities for transfer, treatment and recovery of MSW, but East Kent is less well served. Providing a balanced and accessible network of facilities is an objective of the MWDF.

Figure 13: MSW Facilities



MSW Facilities

11 South East Plan
12 Kent County Council (2007) Joint Municipal Waste Management Strategy

1.5.5 The Allington energy from waste plant at Maidstone will take municipal waste from most of the county. It has additional capacity not contracted to the county council available for MSW or Commercial and Industrial (C&I) waste from East Kent or from outside Kent. It is enabling Kent to divert waste from landfill and to meet the national and regional targets for moving the treatment of waste "up the hierarchy".[13] Kent has a large new plant for enclosed composting of green and kitchen waste at Blaise Farm (near West Malling), and four large plants for separating dry recyclable material such as paper, cans and plastic.

1.5.6 Kent's geology coupled its with industrial past have lead to many former and current mineral workings in Kent, some of which are used for waste disposal. There are two non-hazardous landfill sites, two hazardous sites and numerous inert sites.

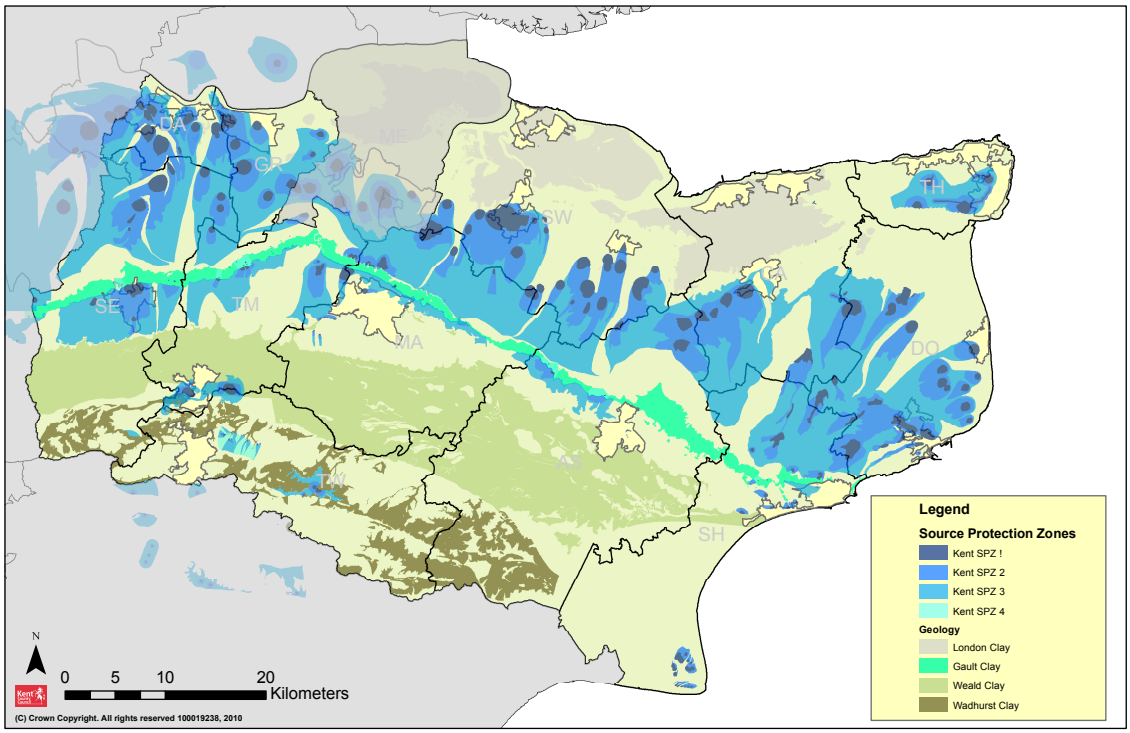
1.5.7 Kent is located close to London and parts of the county are accessible to Essex in the north, Surrey to the west and East Sussex to the south. There has long been cross border movement of waste; Kent has relied on landfill of MSW within the London area and Essex, and while this is coming to an end, commercial and industrial waste continues to be exported.

1.5.8 Increasing quantities of construction waste come to into the county from London for landfill, and more recently some MSW has been transported to Kent to take the spare capacity in Kent's new waste treatment infrastructure.

1.5.9 The provision of waste management facilities is influenced by important national and international planning constraints. Geology and hydrology also constrain where waste landfill might be sited if required. Areas with clay geology, outside water Source Protection Zones which are not liable to flooding, may be suitable for future landfill subject to suitable engineering solutions and any local environmental impact being acceptable.

13 Waste Hierarchy is defined as the 3Rs of Reduce, Reuse and Recycle which classify waste management strategies according to their desirability. The 3Rs are meant to be a hierarchy, in order of importance, with disposal of waste to landfill at the bottom (least desirable option).

Figure 14: Kent Major Clay Horizons and Water Resource Areas



Kent's Major Clay horizons and Water Resouirce Areas

2 Defining a Spatial Vision

2.1 Introduction

2.1.1 Producing the new Kent Minerals and Waste Development Framework (MWDF) gives an opportunity to take a fresh look at the issues and to take some bold steps towards delivering improvements in mineral supply and waste resource management based on the principles of sustainable development.

2.1.2 Identifying a vision for minerals and waste in Kent allows us to translate broad sustainability principles and put them into a context that is relevant to our communities and businesses.

2.1.3 In short, the aim is to enable waste to be considered as a valuable resource, whilst at the same time providing a steady supply of minerals to allow sustainable growth to take place. It will also ensure that emerging national and local requirements such as a low carbon economy are taken into consideration.[14]

2.1.4 As the MWDF will plan for minerals and waste in Kent up to the end of 2030, it is important to recognise that technology will change over the plan period. Therefore, the plan has to be robust enough to enable improvements in technology to be incorporated into future minerals and waste facilities.

14 A Low-Carbon Economy (LCE) or Low-Fossil-Fuel Economy (LFFE) is an economy which has a minimal output of greenhouse gas (GHG) emissions into the biosphere, but specifically refers to the greenhouse gas carbon dioxide.

2.2 Draft Spatial Vision for Minerals and Waste in Kent

Over the period to 2030 sustainable minerals and waste related development will make a positive and sustainable contribution to the Kent area and assist progress towards a low carbon economy. It will support needs arising within the regional growth areas in Kent Thames Gateway and Ashford, the Maidstone and Dover Growth Points and the county's other principal urban areas.

- Minerals and waste development will contribute to maintaining a supply of the range of economic minerals and driving the management of waste up the waste management hierarchy.

- Kent's remaining economic mineral resources will be husbanded in order to avoid inefficient or inappropriate use. Kent's land-won minerals and the infrastructure necessary for importation of minerals into Kent at wharves and railheads will be safeguarded from inappropriate alternative development. Use of sustainable construction techniques will be the norm and use of alternative materials, in place of land won minerals will progressively increase through the efficient reuse of recycled aggregates or use of secondary materials. Recycling and reuse of construction waste will be maximised.

- Where primary construction aggregates are required, a range of environmentally and socially acceptable land-won and imported (including marine dredged and crushed rock) sources will supply the markets so that a competitive and a productive minerals industry is sustained.

- Business and communities will be taking responsibility for the municipal, commercial and industrial and construction waste they generate and will be minimising its production. Waste arisings in Kent are treated as a resource with higher levels of recycling and reuse and the management of all waste streams moving progressively up the waste hierarchy. Only the residues of recovery operations are disposed of in landfills. Net self sufficiency in waste management capacity in Kent is in place.

- The development of a sustainable framework for waste management and minerals development in Kent has ensured that Kent's diverse, distinctive and highly valued natural and cultural environment are protected, conserved and enhanced for future generations. Mineral working, including restoration and aftercare, and waste management practices are sensitive to local communities and surrounding environmental character.

- New waste management technology will provide the best solutions and allow waste to be dealt with in an environmentally acceptable manner, minimising pollution and other adverse effects. The potential of waste treatment to contribute to renewable energy supply will have been realised, through the generation of electricity from waste, harnessing the maximum amount of heat produced. Minerals and waste developments will incorporate renewable energy production.

- Identification of additional waste management capacity, new mineral workings and imaginative and useful restoration and aftercare provisions will be the result of collaborative working involving communities, landowners, the minerals and waste industries and other key stakeholders. The identified locations for minerals and waste development will provide deliverable, cost effective, sustainable solutions to Kent's future needs for minerals and waste.

Question 1

a) Do you agree with the draft spatial vision for Kent's future minerals and waste needs?

b) If not, how would you change the vision?

3 Strategic Objectives for the Minerals and Waste Core Strategy

3.0.1 Whilst the vision describes what will be achieved, the objectives explain how the vision will be achieved.

3.0.2 By monitoring and reviewing progress against these objectives, it will be possible to see how much progress is being made in working towards achieving these requirements. It will also show whether the policies are having the required effects and help to identify what may need to be done to improve things.

3.0.3 The proposed vision outlines our ambition for sustainable resource management in the Plan area up till the end of 2030. All of the objectives that follow are underpinned by an ambition to manage waste and mineral extraction and supply according to the principles of sustainable development, supporting the national strategy for Sustainable Communities and the delivery of Kent's community strategies. They are not listed in any particular order of importance.

Draft Strategic Objectives

- To provide clear guidance to Kent's communities on minerals and waste planning policy and proposals through a collaborative approach to public involvement and awareness raising. The aim is to drive the management of waste up the waste hierarchy and contribute to the sustainable location and management of minerals related development.
- To protect and enhance the quality and diversity of Kent's natural and historic environment including the designated landscapes of the Kent Downs and High Weald Areas of Outstanding Natural Beauty, Kent's nationally and internationally recognised nature conservation assets, its landscape character and biodiversity value.
- To ensure that the location and form of minerals and waste related development (and their after uses) contribute to the mitigation of, and adaptation to, the effects of climate change and progress towards a low carbon economy. Methane derived from landfills will be captured and used for electricity generation.
- To encourage options for the sustainable transportation of minerals and waste in reducing the environmental impacts of transporting materials by road through Kent.
- To ensure that minerals and waste related development respect their surroundings and minimise their impact on the natural and built environment and the amenity of local communities.
- To minimise the need to transport waste consistent with the provision of viable sustainable waste management facilities and, where possible, to source, work or process minerals close to market areas.

- Proven mineral reserves which are, or may become, of economic importance will be safeguarded from non-compatible development as well as facilities for the handling and processing of minerals and the management of waste. North Kent wharves will continue to be recognised as strategically important for the importation of marine dredged aggregates and crushed rock to supply the construction industry in Kent, London and in the greater South East Region. The wharves at Whitstable, Ramsgate and Dover will continue to provide essential construction aggregates for local markets. Railheads in Ashford and Maidstone areas are important for the supply of construction aggregates into the centre of the county. All active importation points will be safeguarded.
- To provide for a supply of primary mineral resources (including marine dredged aggregates and imported crushed rock) in Kent consistent with national objectives and apportionments whilst facilitating reduced reliance on primary sources through provision of a network of facilities for the handling and processing of recycled and secondary materials.
- To provide for a range of types and technologies of waste management facilities and sufficient capacity for recycling and recovery facilities to respond to local waste management needs (for all waste streams), as well as the safeguarding of existing waste management facilities needed for the management of Kent's waste. In doing this, regard must be taken of Kent's Municipal Waste Management Strategy and Kent's contribution to meeting capacity for landfilling of residual waste from London.
- To encourage the restoration of mineral workings and landfills so that they deliver tangible benefits to Kent's communities and contribute towards improving biodiversity.

Question 2

a) Do you agree with the draft strategic objectives for Kent's future minerals and waste needs?

b) If not, how would you change the objectives?

4 Key Mineral Issues

4.1 Ensuring an Adequate Supply of Construction Aggregates

Background

4.1.1 National Policy in MPS1[(15)] identifies the need for a balance between the four different supply sources of construction aggregates to be maintained: land-won (from quarries), marine dredged aggregates, imports (through wharves and railheads from outside the area) and secondary and recycled aggregates, with the need for encouraging the use, where practicable, of alternative aggregates in preference to primary aggregates.

4.1.2 Construction aggregates are quantitatively the most significant mineral group now worked in Kent. A number of different types of construction aggregates have traditionally been worked at quarries in Kent, including flint and sandstone gravels, soft sand (building sand), ragstone and building stone.

4.1.3 Construction aggregate supply systems in England have been managed through the Managed Aggregate Supply System (MASS). The management of the supply of aggregates is intended to assist planning bodies in the timely preparation and revision of their spatial strategies, and mineral planning authorities (MPAs) in the preparation of local development documents (LDDs), in a way that addresses effectively the geographical imbalances between supply of, and demand for, aggregates at national level.

4.1.4 The MASS has been implemented through a hierarchy of planning policy and supply requirements. Firstly at national level, Communities and Local Government (CLG) prepare and publish Minerals Policy Statements and their associated practice guides, which set out policy and guidance for minerals planning. CLG also periodically prepare and update National and Regional Guidelines for Aggregate Provision in England. These contain details of future aggregate provision requirements at a regional level.

4.1.5 CLG also assists in funding the Regional Aggregate Working Parties (RAWPS) which were established to provide technical information on construction aggregate supply and demand at a regional level. The RAWPS consist of representatives from the minerals industry and their trade associations as well as representatives from the Mineral Planning Authority for the region. The RAWP technical secretary is responsible for collating and publishing data on construction aggregate supplies within the region, on an annual basis.

15 Minerals Policy Statement 1: Planning and Minerals (Nov 2006) (Annex 1 - Aggregates). Communities and Local Government.

4.1.6 At a regional level, the Regional Spatial Strategy (RSS) for the South East (The South East Plan)[16] included minerals supply and safeguarding policies. Historically the dividing up of the region's construction aggregate supply requirements into the supply levels at the county level (the sub-regional apportionment) has been included within the remit of the RSS.

4.1.7 At a local level, the Mineral Planning Authority (MPA) is the county council in two tier authorities and the unitary authority in single tier areas (e.g. Medway). It is therefore Kent County Council's role to prepare and update relevant suitable policies for the future supply and safeguarding of construction aggregate sites within the framework of the Kent Minerals and Waste Development Framework (MWDF) Development Plan Documents (DPDs).

4.1.8 Whilst the South East Plan has been abolished, the Secretary of State for Communities and Local Government has set out guidance[17] confirming that planning authorities in the South East of England should work from the apportionment set out in the 'Proposed Changes' to the revision of Policy M3, published on 19 March 2010.

4.1.9 The South East Plan land-won aggregate policy had been the subject of a detailed review and consultation process, including an Examination in Public (EiP) in October 2009. The conclusions and recommendations from the Panel of the EIP, published as a Panel Report was submitted to the Secretary of State in November 2009. The Secretary of State has taken forward the recommended levels of aggregate provision within the Panel Report. These have now been the subject of a more recent consultation by Government Office for the South East (GOSE) in March-June 2010.[18]

4.1.10 The new national supply figures for construction aggregates for the South East of England which were recommended within the Panel Report[19] were 11.12 million tonnes per annum (mtpa) of sand and gravel and 1.44 mtpa of crushed rock.

4.1.11 The new sub-regional apportionment figures for Kent land-won sand and gravel are 1.63mtpa and 0.78 mtpa for crushed rock (ragstone).

4.1.12 These figures reflect sales of land won sand and gravel in Kent over the last 5 years. Land-won sand and gravel sales have been falling in Kent over the last 10 years, as shown in Table 1. This reduction in sales can be attributed to sites

16 Communities and Local Government. Government Office for the South East (May 2009) The South East Plan. Regional Spatial Strategy for the South East of England.

17 Revocation of Regional Strategies. Letter from the Chief Planning Officer to Local Planning Authorities in England. 6th July 2010.

18 Government Office for the South East (March 2010). The South East Plan. The Secretary of State's Proposed Changes. Regional Spatial Strategy for the South East. Policy M3 – Primary land-won aggregates and sub-regional apportionment.

19 Examination in Public Panel Report, (November 2009) Partial Review of the Regional Spatial Strategy for the South East - Aggregates.

closing and diminishing demand for land won sand and gravel. Also, a major part of the market area is the north-west of the county which is well supplied by wharves supplying marine dredged aggregates on the north Kent coast.

Table 1 Average Sales of land–won Sand and Gravel: Kent Area

	Ave. Annual Sales (tonnes)
Last 10 years	1,821,345
Last 5 years	1,708,354
Last 3 years	1,703,618

4.1.13 Both the South East England Regional Aggregate Working Party (SEERAWP)[20] and Kent County Council submitted responses in support of the new sub-regional guideline figures for land won construction aggregates.

4.1.14 Therefore the Core Strategy will include policies which make provision for 1.63mtpa of land-won sand and gravel with a seven year landbank of planning permissions and 0.78mtpa of crushed rock (ragstone) with a ten year landbank of planning permissions. These landbank criteria are specified in national minerals policy.

Land Won Sand and Gravel Requirements

4.1.15 Sufficient land-won reserves of sand and gravel will therefore need to be identified and allocated to ensure that Kent maintains its sub-regional apportionment for the plan period (up to the end of 2030).

4.1.16 The South East England Partnership Board (SEEPB) Aggregate Monitoring Survey 2008[21] identified the following levels of permitted reserves of construction aggregates remaining unworked in Kent on 31st December 2008:

20 South East England Regional Aggregate Working Party (SEERAWP) is one of the Regional Aggregate Working Parties (RAWPs) which were established in the mid-1970s to identify and consider likely regional problems in the supply of aggregates. They provide technical advice in relation to the supply of, and demand for construction aggregates (including for sand, gravel and crushed rock) to the Regional Assemblies/Regional Planning Bodies and the Secretary of State for Communities and Local Government. They undertake annual monitoring of aggregates production, by type and use, and levels of permitted reserves, and every fourth year an expanded survey that includes data on transportation of aggregates and which allow levels of consumption of and, thus, demand for aggregates by region to be assessed.

21 South East England Partnership Board (December 2009). Aggregates Monitoring Report 2008.

Table 2 Unworked Land-Won Sand and Gravel Reserves in Kent (end 2008)

Soft Sand	10,327,000t
Sharp Sand and Gravel	9,931,839t
Crushed rock	Over 30mt (actual figure confidential)

4.1.17 Based upon the proposed apportionments of 1.63mtpa, Kent would theoretically require about 31mt of sand and gravel for the 19 year plan period (2012-2030). However, the current existing reserves situation and the continual draw down on consented reserves have to be taken into consideration in estimating the landbank requirements for the plan. These combined give a revised land-won sand and gravel requirement for the whole of the plan period of circa 27mt.

4.1.18 In order to ensure flexibility in the plan and to account for possible issues of deliverability or erroneous estimates of reserves in sites, subject to suitable sites coming forward from industry, it is proposed to aim to allocate land-won sand and gravel sites sufficient to deliver 30mt of land-won sand and gravel for the plan period.

Question 3

(a) Do you agree that Kent should aim to allocate sufficient land-won sand and gravel to provide for the national land bank requirements for the whole of the plan period?

(b) Should the MWDF make provision for an additional amount of circa 10% of the total required for the plan period to give a degree of flexibility required in national policy?

Crushed Rock (Ragstone)

4.1.19 Theoretically, Kent needs to plan for 15mt for the 19 year plan period, based upon the apportionment of 0.78mtpa. Given that the permitted reserves are well in excess of 30mt (on 31st December 2008), held in two sites, and a draw down equivalent to the annual apportionment, Kent has sufficient ragstone reserves to last throughout the length of the plan and beyond.

Question 4

The landbank for crushed rock (ragstone) appears to be more than sufficient for the plan period. However, there have been concerns raised by operators about the quality of the largest consented ragstone deposit. In view of this:

(a) Should further areas for ragstone working be identified and allocated in the minerals and waste Development Plan Documents if there is no need to do so to meet national policy requirements?

(b) If so, should these areas be in the form of areas of search,[22] preferred areas [23] or specific sites?[24]

Landbank Provision for Different Types of Sand and Gravel

4.1.20 Both national minerals policy and the revision to the South East Plan land-won minerals policy allow Mineral Planning Authorities (MPAs) to make separate landbank provisions for different types of construction aggregates where appropriate.

4.1.21 In Kent, sand and gravel consists of two main types, which are derived from different geological formations and have different end uses:

- Soft sand (building sand) used mainly for mortar production and in asphalt.
- Sharp sand and gravel used mainly for concrete and concrete products.

22 'Areas of Search' are broad areas where knowledge of mineral resources may be less certain than in other types of site allocations, but within which planning permissions could be granted to meet any shortfall in supply if suitable applications are made.

23 'Preferred areas' are areas of known resource where planning permission might reasonably be anticipated (subject to the usual tests of environmental acceptability, if necessary through the use of appropriate conditions to mitigate adverse impact).

24 'Specific sites' will generally be where viable mineral resources are known to exist, where landowners are supportive of mineral development taking place and where the MPAs consider that any planning applications are likely to be acceptable in planning terms.

4.1.22 The five year average sales figures for sharp sand and gravel and soft sand in Kent[25] show that, if the landbank for sand and gravel is based on past sales, it should be split on the basis of: 60% sharp sand and gravel, 40% soft sand. However there are different options for consideration regarding a possible split of the sand and gravel landbank:

1. Do not split the apportionment and plan for sand and gravel as a whole.

2. Split the apportionment at 40% soft sand and 60% sharp sand and gravel (based on recent sales data).

3. Split the apportionment at a different percentage which takes into account availability of alternative sources (substitutes) for sharp sand and gravel including marine dredged aggregates, imported hard rock and recycled aggregates.

4. Split the apportionment between soft sand and sharp sand and gravel through some other ratio.

Question 5

(a) Do you think that the land-won sand and gravel landbank should be split into two separate landbanks –one for soft sand and the other for sharp sand and gravel?

(b) If so, how should the ratio between soft sand and sharp sand and gravel be determined?

4.2 Maintaining Supplies of Recycled and Secondary Aggregates

4.2.1 National minerals policy in MPS1 encourages the greatest possible use of alternatives to primary aggregates. The National and Regional Aggregate Guidelines for Aggregate Provision[26] set a target for both land won aggregates and recycled aggregates. The national and regional guidelines will be reviewed and revised when necessary.

4.2.2 Whilst Kent has sufficient consented facilities to meet the relevant targets for secondary and recycled aggregate provision(1.4mtpa of secondary and recycled aggregates by 2016), many of the facilities that are currently operational (or dormant)

25 Kent MWDF Topic Paper TRM1 (2010) TRM1 Aggregate Apportionment and Need.

26 Communities and Local Government (June 2009) National and Regional Guidelines for Aggregate Provision in England 2005-2020.

are based at quarries and are therefore tied to the life of the host site. Additionally, whilst the required level of capacity exists, the level of production of secondary and recycled aggregates dropped in 2008 to under 1mt, due to the economic recession.

4.2.3 Larger construction projects have to prepare 'Site Waste Management Plans', which take into consideration the need to find a suitable facility for any waste which can be recycled. Some larger building sites also have their own crushing and screening facilities on site, so that any recyclable material arising from these projects is not removed off site.

4.2.4 Some large and permanent recycled aggregate facilities are now being located in industrial estates or business parks. These are more likely to have higher quality environmental controls in terms of concrete hardstanding with closed drainage systems controlling potential discharges to ground and modern noise and dust control systems.

4.2.5 In order to achieve high quality aggregate from these facilities they may often include 'washing' plants as well as crushing and screening facilities.

4.2.6 In order to continue to increase the amount of recycled aggregate that is produced and utilised in Kent, it will be necessary to allocate a mix of different sized facilities – with some replacement temporary facilities located within quarries, some permanent locations in industrial estates and others including aggregate washing facilities with associated environmental controls.

Question 6

The following questions are repeated in Section 5.11, please do not answer them twice.

(a) Do you agree that to continue to encourage the maximum amount of recycling of aggregates in Kent, a mix of site types for these activities should be identified and allocated?

(b) In order to encourage the maximum amount of recycling of this waste stream, do you agree that, wherever possible and acceptable in environmental terms, every quarry in Kent which needs inert fill for restoration should be encouraged to incorporate an aggregate recycling facility in its operations?

4.2.7 Colliery spoil was tipped at the surface of four coalmines situated on the East Kent Coal Field; Chislet (Hersden, near Canterbury), Snowdown, Tilmanstone and Betteshanger. The last Kent coal mine closed in the 1980s. The colliery spoil tip at Chislet has been almost entirely removed and sterilised as a secondary aggregate; the coal mine site has been redeveloped as a commercial and industrial park.

4.2.8 The other three colliery tips occur within the Dover District. Betteshanger colliery spoil tip has been redeveloped as a country park and has been fully landscaped. Snowdown colliery has been worked for secondary aggregates in the past, some colliery spoil remains on site but activity at this site has ceased. Tilmanstone is the home of a modern brick works which utilises colliery shale in brick making, although this facility is currently not operating.

Tilmanstone Brickwork – which uses Colliery Shale for Brick Making

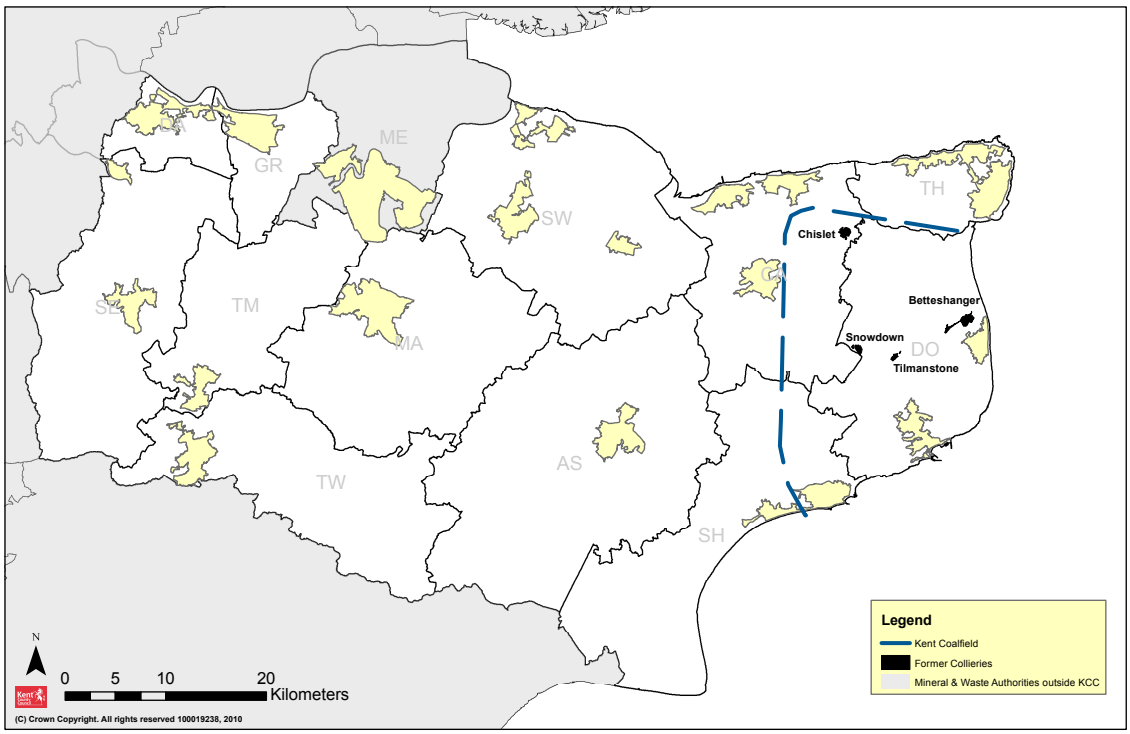
4.2.9 Snowdown contains about 5mt of colliery spoil material. However any significant recycling activities at Snowdown would need substantial improvements to the local road network. Use of the on-site rail sidings may be possible, which would be the best way to remove the material from site.

4.2.10 Tilmanstone has now partially been redeveloped for commercial uses. The remaining colliery spoil tips will be required for the brickworks, if and when it re-opens.

Question 7

Any new use of colliery spoil from the East Kent coal mines is most likely to occur from Snowdown. If this is proposed, then the removal of material off site by rail will be required. Do you agree with this statement?

Figure 15: Location of Old East Kent Coalmines and Former Colliery Sites



East Kent Coalfield and Former Colliery Sites

4.2.11 National minerals policy states that where mineral or other wastes suitable for use as aggregate have been deposited in landfills, without the benefit of planning permission for future use, and these have re-vegetated and blended into the landscape, any applications for working of these materials should be dealt with in the same way, and, if permitted, be worked to the same standards as a successful application for a new application for primary mineral material.

4.2.12 National minerals policy is silent on the issue of re-working of inert waste in current operational sites or those that were simply left before existing planning controls required high quality restoration.

Question 8

(a) Should the re-working of landfill material deposited in inert waste facilities be considered in the future, in order to contribute towards an increase in the supply of recycled aggregate material, thus reducing the reliance upon primary aggregate supplies?

(b) If so, under what circumstances should this be considered acceptable?

4.3 Maintaining Supplies of Imported Crushed Rock and Marine Dredged Aggregates

4.3.1 Imports of both marine dredged aggregates and crushed rock into Kent's wharves make a significant contribution towards meeting a strategic regional and wider need; supplying Kent, the South East region, London and parts of East Anglia. Landings of marine dredged sand and gravel in Kent have consistently accounted for approximately 30% of all landings in the South East of England region (which excludes London) over the period 1998-2008. In addition, landings of marine dredged aggregates into Medway wharves have consistently accounted for 25% of all landings in the South East England period over this period. Imports of crushed rock into wharves in Kent and Medway consistently accounted for circa 80% of total imports into the South East Region over the period 1998-2006. In 2007 & 2008 the percentage of total imports of crushed rock into the South East region landed at wharves in Kent and Medway increased to 90% of the region's total (2.7mt in 2007 and 2.1mt in 2008).

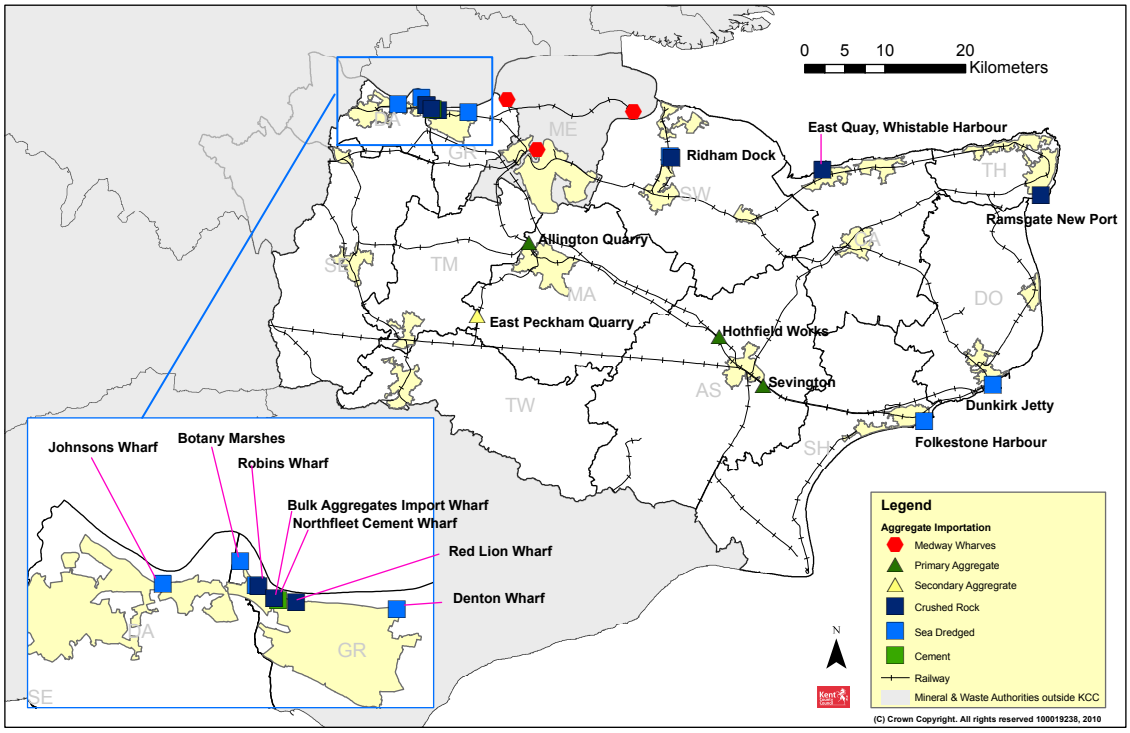
4.3.2 Construction aggregates are also imported into the South East of England by rail. These originate generally from Western England. The rail depots in Kent (at Allington, Ashford and Hothfield) imported around half a million tonnes per annum of aggregates in 2007 and 2008. These imports are important for meeting the local demand for construction aggregates, especially as the importation points are near Maidstone and Ashford, areas which cannot be served easily from the crushed rock imports from the deep water wharves of the North Kent coast.

4.3.3 Kent and Medway commissioned a report in 2006[(27)] which studied the current aggregate wharves and railheads within the two authorities. It concluded that 'the overall picture for Kent and Medway combined is very good in that there has been no overall loss in number of aggregate facilities and consequently no reduction in capacity. There is also a good geographic spread of the facilities to meet most of the market areas they are intending to serve. Many existing facilities have benefited from some improvements to their sites in terms of accessibility in recent years'. It also found that existing aggregate import facilities are operating well below their previous

27 Land and Minerals Management Ltd (February 2006) Kent Aggregate Imports into Kent & Medway (excluding road imports) on behalf of Kent County Council.

peak throughputs and had, at that time, reasonably good expansion potential – particularly where facilities for the onward movement of processed material by rail or water are possible.

Figure 16: Existing Wharves and Rail Aggregate Depots



Existing Wharves and Rail Aggregate Depots

4.3.4 Kent is well served by wharves and railheads and these play an important strategic role in the supply of construction aggregates both for Kent and for the Greater London and South East of England.

4.3.5 Safeguarding these facilities will be discussed in section 4.10.

Question 9

There is sufficient capacity in existing aggregate importation facilities (wharves and railheads) to provide for future increases in demand. It therefore appears that there is no need for further wharves and railheads to be identified or developed in Kent. Do you agree with this statement?

4.4 Maintaining Supplies of Brickearth and Clay for Brick and Tile Works and Engineering Purposes

4.4.1 There is a national mineral policy requirement to provide a stock of permitted reserves of brickearth and clay for each new or existing brickworks and tileworks. It is policy requirement that this should be sufficient to provide for 25 years of production at the works.[28]

4.4.2 Three out of the six brick and tile manufacturers will need additional reserves to provide for the 25 year landbank.

Table 3 Clay and Brickearth Landbanks at Kent's Brick and Tile Works

Name of Works	Operator	Source	Length of Supply
Babylon Tile Works, Maidstone	V&M Gash	Weald Clay	Over 25 years
Hammill Brickworks, Sandwich	Hammill Brick Ltd	Thanet Sands	Closed in 2008
Funton Factory, Sittingbourne	Ibstock Brick Ltd	Brick Earth	Closed in 2008
Ospringe Brickworks, Faversham	Cremer & Whiting Ltd	Brick Earth	Less than 10 years
Smeed Dean Brickworks, Sittingbourne	Wienerberger Ltd	Brick Earth	Less than 10 years
Tilmanstone Brickworks, Dover	Hanson Building Products	Weald Clay Gault Clay & Colliery Shale	Over 25 years Less than 10 years Over 25 years (Mothballed)

4.4.3 Tilmanstone Brickworks is a modern facility located on the former Tilmanstone Colliery. It utilises the on-site colliery shale as its main source of raw material, which has been blended with Weald Clay from Pluckley (near Ashford) or Gault Clay (from Aylesford), dependent upon the colour of bricks that it was producing. The plant is currently mothballed, though it is understood that bricks continue to be sold from existing stock piles.[29] Weald Clay is transported over 40km to the brickworks and Gault Clay over 60kms. Substantial reserves of Weald Clay remain at Pluckley

28 Communities and Local Government (November 2006) Minerals Policy Statement 1: Planning and Minerals Annex 2. Brick Clay.

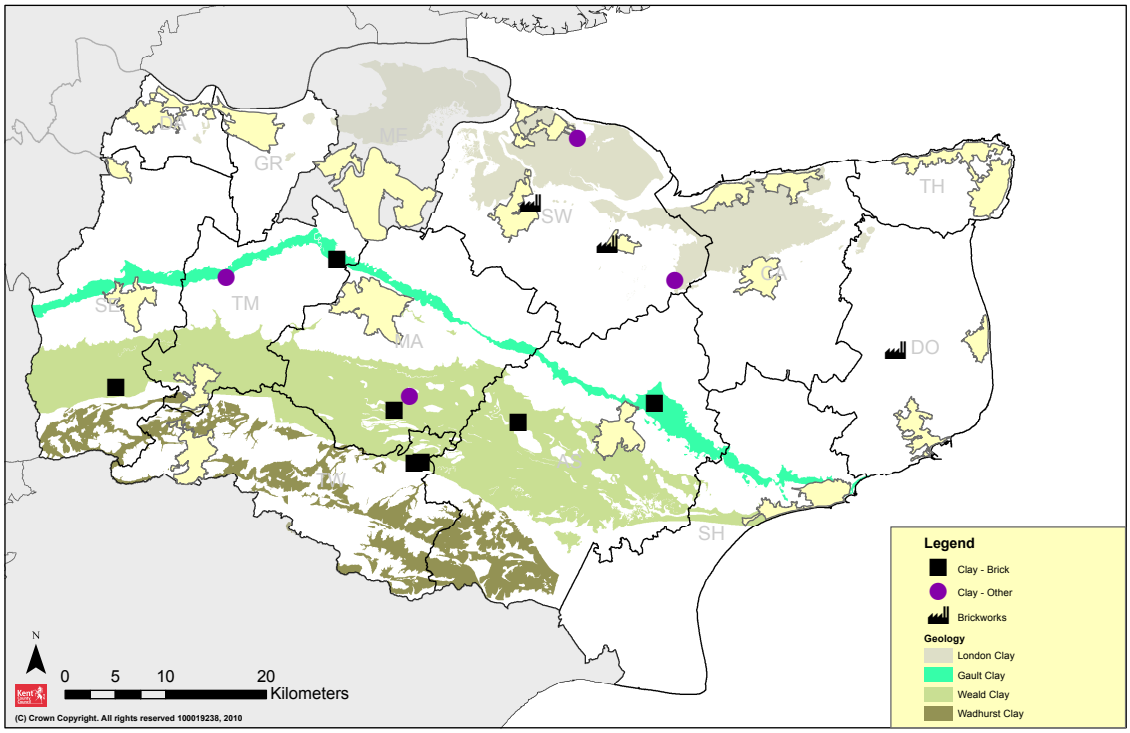
29 Kent M&WDF 2010 Topic Paper 'Other Minerals'.

(estimated at 1m cubic metres in January 2008 with an annual consumption of 20,000 cubic metres per year) though there are no remaining reserves of Gault Clay at Aylesford. There are some reserves of these materials stockpiled at the brickworks.

4.4.4 Additional Gault Clay reserves may therefore need to be identified and allocated to enable the long term continuation of brick making at Tilmanstone.

4.4.5 Substantial reserves of brick clay remain in five dormant sites (one on Gault Clay and four on Weald Clay), though it is doubtful whether these sites will be re-opened.

Figure 17: Existing Clay Permissions and Brickworks



Existing Clay Permissions and Brickworks

4.4.6 Unlike planning for land-won aggregates, there are no national or regional forecasts or supply level requirements for brick and tile making facilities. It is therefore considered that recent levels of production are the best indicator of demand. Potential changes in the level of house building in the medium to long term could be anticipated to increase the level of demand for bricks and tiles but at present there is no evidence upon which an increase in level of demand can be based upon.

4.4.7 There is one tile works remaining in Kent, south of Maidstone, utilising Weald Clay. This is a small cottage industry which manufactures hand-made Kent peg tiles for conservation and building restoration projects. The current planning permission requires clay extraction to cease by April 2022 and for Kent peg tile manufacturing to cease after a further year. Permitted reserves are sufficient to supply the tile works beyond 2022.

4.4.8 There are currently two operational brickworks in the north Kent areas of Faversham/ Sittingbourne area using deposits of brickearth for the manufacture of bricks. These are Smeed Dean (Weinerberger) and Ospringe (W T Lamb). These two remaining brick works are likely to require further reserves of brickearth in order to maintain production throughout the plan period.

4.4.9 The brickworks at Funton (Ibstock Brick) closed in 2008. Operations have been transferred to Ashdown brickworks which are near Bexhill, in East Sussex. Brickearth from permitted reserves in Kent (Hempstead House, near Sittingbourne) can be used to continue the manufacturing process of the London Stock Brick. This source of brickearth will be exhausted around 2012 and so replacement reserves are likely to be required in order to continue production.

4.4.10 National minerals policy recognises this sort of situation, and requires separate provision for particularly scarce clays that will serve a number of works, sometimes over long distances.

4.4.11 The excavation and transportation of this mineral for brick making in East Sussex is a small scale operation, which is carried out on an infrequent basis.

Question 10

(a) Is there any evidence, other than past sales, which could be used to estimate future demand for brickearth and clay for brick making in Kent?

(b) Should further reserves of brickearth be identified and allocated in Kent to provide the raw material for a brickworks which is located in East Sussex, or should Kent reserves of brickearth be only worked to supply local (Kent) brickworks?

4.5 Maintaining Supplies of Minerals for Cement Manufacture

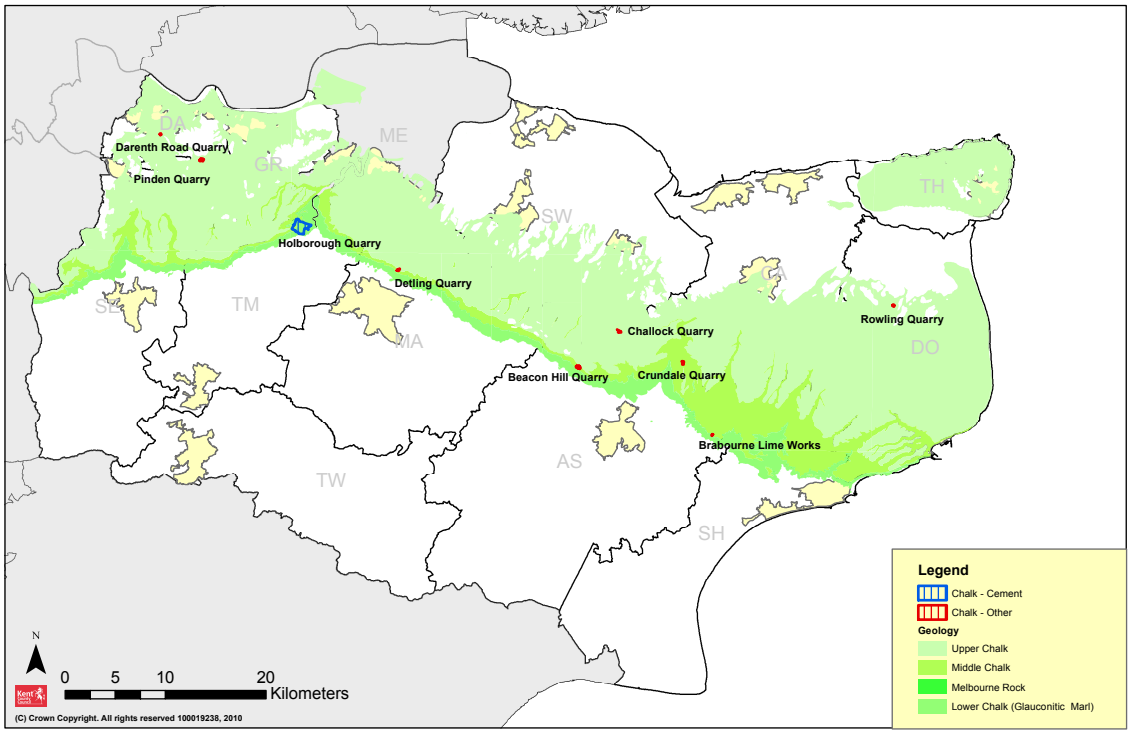
4.5.1 Kent has historically benefited from a thriving cement industry, based around the chalk quarries of North Kent. Whilst National minerals policy remains silent upon the required length of the landbank for cement works, regional policy in the South East Plan[(30)] required permitted reserves of chalk for cement manufacture sufficient to last for at least 25 years at current production rates, to be maintained throughout the plan period in Kent and Medway.

4.5.2 The closure of the Northfleet cement works in 2008 means that there are currently no active cement quarries in Kent. There is however, a large consented quarry area adjacent to the permitted new Holborough Cement Works, which has

30 Communities and Local Government (May 2009) Government Office for the South East. South East Plan Regional Spatial Strategy for the South East of England Policy M4: Other Minerals.

not yet been developed. It was stated that this new works would have a production capacity of 1.4mtpa and would operate for about 35 years. The new works would obtain its principal raw materials (chalk, marl and clay) from the adjoining 112ha quarry, which was estimated to contain 72 million tonnes of reserves, which would be utilised at a rate of 2.2mtpa of material as dug. Reserves were estimated at equivalent to 35 years of production at the works.

Figure 18: Existing Chalk Permissions and Geology



Existing Chalk Permissions and Geology

Table 4 Chalk and Clay Landbanks at Cement Works in Kent

Name of Site Operator	Length of Supply
Holborough Cement Works, Lafarge Cement UK	Not yet constructed. Over 25 years at planned consumption rate
Northfleet Cement Works, Lafarge Cement UK	Closed in 2008. Demolition virtually completed.

4.5.3 There is therefore no need to identify or allocate any further reserves to supply the Kent cement industry.

4.5.4 Closure of the Northfleet cement works means that permitted Gault clay reserves at Park Farm, Wrotham (Tonbridge and Malling) are no longer required for cement making. This site has 2 million tonnes of permitted reserves of clay. There is no restriction on what this source of clay can be used for, but it is unlikely to be considered suitable for engineering purposes.

Question 11

Do you agree that there is no need to identify or allocate further reserves of raw materials for the cement industry in Kent?

4.6 Maintaining Supplies of Chalk and Clay for Agricultural and Engineering Use

4.6.1 As well as being vital to the production of cement, in Kent, chalk is used in agriculture (for liming agricultural land) and engineering. Clay is also required in some engineering processes.

4.6.2 Kent had at least 3.2mt of permitted chalk reserves at eight quarries at the beginning of 2008. Average production at these quarries over the three years up to 31st December 2007 was 118,850 tpa. Assuming that production remains at this level over the plan period, there is no apparent need to make provision for new chalk quarries for agricultural or engineering uses.

4.6.3 Clay is extracted from Norwood (a landfill site) on Sheppey for sea defence work. 4.1 million cubic metres of clay were remaining in permitted reserves in Kent at eight sites on 1st January 2008. These supplies could be used for engineering or sea defence work. Whilst some of these sites are dormant, there is no requirement to allocate any further areas of clay for engineering or sea defence purposes.

Question 12

Do you agree that there is no need to identify further areas of clay or chalk for agricultural and engineering purposes?

4.7 Maintaining Supplies of Silica Sand

4.7.1 Quarries in Kent and Surrey produce sand from the Cretaceous age Folkestone Formation for both general construction uses (building sand, concrete and asphalt) as well as for a wide range of specialist (industrial) uses.

4.7.2 Currently, in Kent, there are seven quarries excavating sand from the Folkestone Formation. At Wrotham, Aylesford and Nepicar quarries, specialist (silica) sand forms most of the production. The other soft sand quarries in Kent (Lenham, Charing, Borough Green Sand Pits and Sevenoaks Quarry) produce mainly or virtually all building sand for construction aggregate uses. This use of inferior grade sand that is not capable of being used in industrial applications ensures the efficient use of the whole resource, in line with the principles of sustainable development.

4.7.3 It is the view of the consultants who wrote the Kent and Surrey Silica Sand report that soft sand currently being sold for construction purposes could, with appropriate processing, be suitable for some non-constructional markets and industrial uses. However, the very high grades of silica sand (with low iron content), required for glass production and chemical and ceramic industries can only be met at a few of the active sites. In Kent, glass sand production has taken place in the past in the Hollingbourne and Bearsted area (near Maidstone)[31] and records suggest that the area east of Maidstone should be investigated for potential silica sand production.

4.7.4 The silica sand deposit in Kent and Surrey includes an unusually high quality resource.

4.7.5 National Policy in Minerals Planning Guidance 15: Provision of Silica Sand in England (1996) requires landbanks of silica sand permissions to be maintained as far as is possible and realistic, provided that industry comes forward with suitable sites. The landbank requirements for individual silica sand sites is at least 10 years with landbank requirements for new greenfield silica sand quarries being least 15 years.

4.7.6 The current situation regarding the Folkestone Bed sand quarries which provide mainly silica sand is as follows:

Table 5 Site Operators and Length of Supply

Name of site	Operator	Length of supply
Addington (Wrotham) Sand Pit	Hanson Aggregates	Less than 5 years
Aylesford Sand Pit	CEMEX	Over 15 years
Nepicar Farm	J Clubb	Over 15 years

4.7.7 It is therefore likely that further reserves for one of these sites may need to be identified and allocated, or alternative supplies located. However, some of these deposits lie within the AONB and therefore national planning policies relating to

31 B.C. Worssam (1963) Geology of the Country Around Maidstone. Geological Survey of Great Britain.

development within this nationally important landscape area will have to be taken into consideration. The need for further reserves will have to be balanced against the need to protect the nationally important landscape.

Question 13

How should we plan for future silica sand reserves whilst taking into account the nationally important Area of Outstanding Natural Beauty (AONB) designation as well as other environmental constraints?

4.8 Maintaining Supplies of Building Stone

4.8.1 Building stone is now only extracted from the existing ragstone quarries, in very small quantities. As there is a sufficient landbank of ragstone to provide for the duration of the plan and into the long term, there is probably no requirement to identify or allocate further reserves of this material.

4.8.2 However, national planning policy in MPS1 requires the recognition of the important role that small quarries can play in providing historically authentic building materials in the conservation and repair of historic and cultural buildings and structures.

Question 14

Are there any proposals to quarry small scale supplies of specialised local building stone in Kent over the next 20 years?

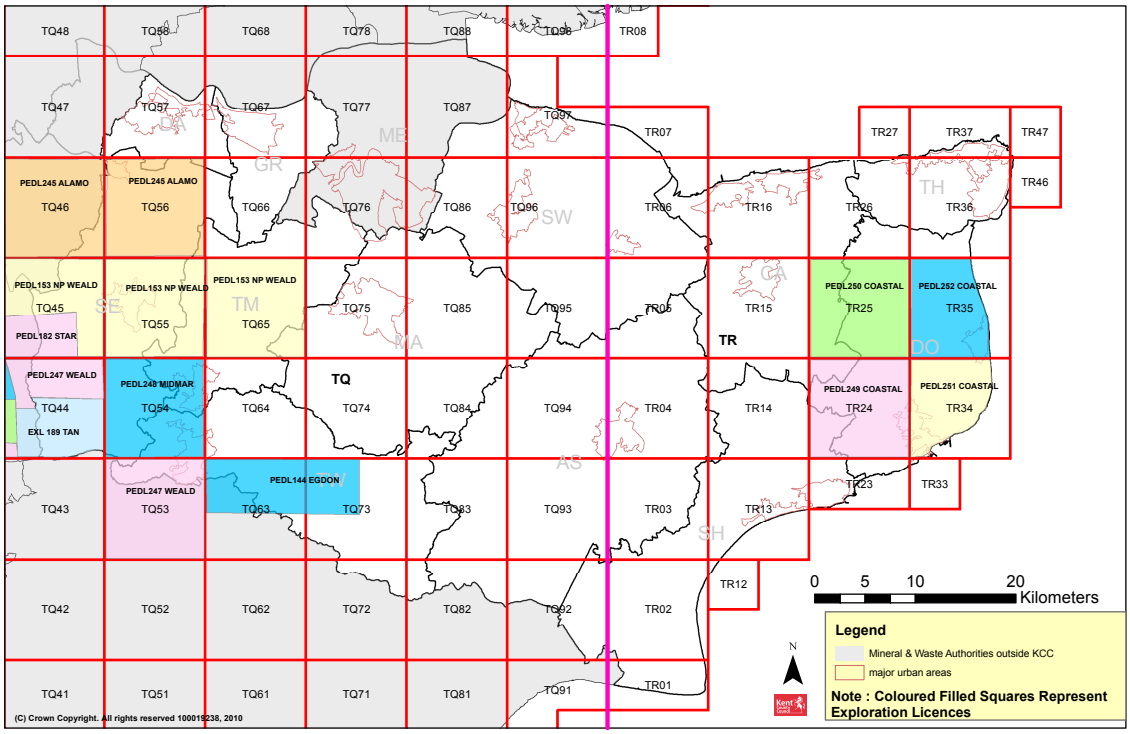
4.9 Anticipating Future Development of Coal, Oil & Gas

4.9.1 The Coal Authority have confirmed recently that there are no proposals foreseen to re-establish coal mining in Kent.

4.9.2 Coal bed methane is natural methane trapped within the coal seams when the coal measures were formed from the degradation of plant life at the time of the deposition of the material. It is extracted by drilling into un-mined coal seams to release the methane. It is not known whether there will be any plans to develop coal bed methane within Kent during the next 20 years.

4.9.3 Much of the county is covered by licensed areas for oil and gas exploration. Especially important are the areas between Maidstone and Canterbury and along the Kent-Surrey and Kent-East Sussex borders.

Figure 19: Location of Oil and Gas Exploration Areas in Kent



Location of Oil and Gas Exploration Areas in Kent

4.9.4 Under national minerals policy in MPS1 Annex 4[(32)] planning authorities are encouraged to include separate policies for each phase that respond to the constraints of areas licensed for oil and gas exploration.

4.9.5 Exploration licenses are regulated by a separate licensing system operated by the Secretary of State for Trade and Industry (SSTI). Once a licence has been granted, planning permission must be obtained before the SSTI will give consent either to drill a well, or to develop an oil or gas field or a coalbed methane project.

4.9.6 As exploration licenses cover such large areas, it would be too inflexible to only consider those areas that are currently licensed. Therefore, a criteria based policy for oil and gas exploration, appraisal and production is proposed as the way to address any possible hydrocarbon or gas exploration, appraisal and development phases.

4.9.7 In particular policies for exploration should provide that drilling operations will not be permitted close to houses and other noise sensitive properties unless noise levels from the drilling and associated work can be reduced to acceptable levels. Also particular care needs to be taken regarding the siting of oil and gas wells close to water supplies.

32 Mineral Policy Statement 1 (November 2006) Planning and Minerals Annex 4: On-shore oil and gas and underground storage of natural gas.

Question 15

(a) Is there any scope to develop coal bed methane resources from the East Kent Coal-field? If so would there be any prospecting or resource developments possible within the timescale of the plan?

(b) In view of the requirement to include consideration of these energy minerals in MWDFs, is a development of a criteria based policy the way to address the possible need to investigate and develop this resource during the plan period?

4.10 Safeguarding Minerals, Importation Facilities and Associated Infrastructure

4.10.1 One of the key sustainable development objectives for minerals planning is to safeguard mineral resources and importation infrastructure as far as possible. This objective is carried out through the definition of Mineral Safeguarding Areas (MSAs) and Mineral Consultation Areas (MCAs). The identification of these areas alerts prospective developers of non-mineral development to the existence of important economic mineral resources. The purpose of these designations is to ensure that economic mineral resources are adequately and effectively considered in land-use planning decisions for non-mineral development. However there is no presumption that any MSAs or MCAs will be worked within the plan period.

4.10.2 Guidance provided by the British Geological Survey (BGS) suggests that it is important to safeguard all economic minerals although it could be considered that it is most important to identify and safeguard those resources where there is a significant risk of sterilisation by other forms of built development. It is recommended by BGS that their plans of unsterilised brick-clay, sharp sand, soft sand and gravel and crushed rock be used as a starting point for this safeguarding exercise.

4.10.3 The aims of buffer zones identified around mineral areas and around important wharves and railheads are to protect residents from environmental impacts arising from future quarrying as well as safeguarding the mineral resource or minerals infrastructure from conflicts that may arise through the close proximity of future sensitive development. Some local authorities are prescriptive in requiring buffer zones of certain sizes. Examples of buffer zones established in other authorities include hard rock (500m), sand and gravel (250m) and clay (50m).

4.10.4 It is known that there are sufficient aggregate importation facilities in Kent to meet current and future demand. However the importation of non-aggregate minerals into Kent wharves and railheads is not so well understood. This will be studied as part of the 2010 mineral importation study which will form part of the evidence base.

4.10.5 There are some mineral resources in Kent which are widespread across the county and are of a relatively low economic value, such as chalk and clay. In these instances it is questionable whether these resources should be safeguarded.

4.10.6 National planning policy also highlights the need to safeguard building stone resources particularly those where the stones match those required to repair historic buildings. Building stones have historically been worked from several discrete areas in Kent, to provide local materials for restoration and conservation work. However, only building stone sourced from ragstone is now worked in Kent.

Question 16

(a) Can industry and landowners assist in providing geological/ borehole/ trial pit data to refine the information base that will be used to inform the safeguarding process? We welcome assistance in this process.

(b) Are there any other known economic mineral resources in Kent which are of sufficient economic or conservation value that warrant protection through safeguarding?

(c) Would a 'buffer zone' approach around economic mineral resources as well as around wharves and railheads be suitable for Kent?

- **If so, what should those buffer zones be for each type of economic mineral and for wharves and railheads?**

(d) Can the minerals industry/ landowners provide data on the current and recent past, the use of Kent wharves and rail facilities for the importation of non-construction aggregate minerals into the county? The relative importance of these wharves for non-construction aggregates mineral importation can then be established and the facilities safeguarded accordingly.

(e) Should all mineral importation facilities be safeguarded, or should only the current economic wharves and railheads be safeguarded together with any that are identified as suitable for use in the future?

(f) Should all aggregate recycling facilities be safeguarded, or should safeguarding policies and designations only be applied to those permanent facilities that are not tied to the life of the host quarry or landfill?

(g) How much of the economic mineral resources of Kent should be safeguarded?

(h) Is it acceptable to adopt a different stance for safeguarding different minerals?

(i) Would it be suitable and realistic to identify all of the Gault Clay, Weald and London Clay resources in Kent for safeguarding, given the widespread distribution of these materials combined with their limited and very local uses? Would a safeguarding policy based on long term supply proposals for each of the known tile and brick manufacturers be sufficient to meet the safeguarding needs for these important local industries?

(j) Would the identification for safeguarding of localised areas for future production of conservation building stone as the only areas that warrant safeguarding be sufficient?

(k) Should the safeguarding policy identify exemptions from the need to comply with the mineral safeguarding requirements, for example, small developments and/ or householder applications?

(l) Where there are mineral safeguarding areas in adjacent authorities which abut the county boundary, should Kent be establishing Mineral Safeguarding or Mineral Consultation Areas adjacent to the safeguarded area in the adjacent authority?

4.11 Strategic Mineral Developments for Core Strategy

4.11.1 National planning policy in Planning Policy Statement 12[33] requires Core Strategies to identify locations for key developments on the Core Strategy Key Diagram.

4.11.2 The Key Diagram will therefore show:

- Current (and recent) extraction sites.
- Mineral resource areas for safeguarding (and associated buffer zones, if required).
- Safeguarded wharves, railheads and other minerals infrastructure (and associated buffer zones, if required).
- Broad areas within which future mineral working can be accommodated.

33 Communities and Local Government (2008) Planning Policy Statement 12: Local Spatial Planning.

4.11.3 The Core Strategy will make clear spatial choices about where developments will be allocated, in broad terms.

4.11.4 Planning Policy Statement 12 allows strategic sites to be identified in the Core Strategy. Strategic sites are those sites that are central to the achievement of the strategy. Core Strategies should not be held up by inclusion of non-strategic sites.

4.11.5 It is not currently proposed to identify any new specific mineral sites for the Core Strategy. Instead mineral resource areas will be shown on the Core Strategy Key Diagram. These will give broad areas where future extraction is most likely to be identified in the Minerals Sites Development Plan Document which will be prepared after the Core Strategy.

Question 17

Are there any types of minerals or actual site locations that you think should be considered as strategic mineral sites for the Core Strategy? If so, why?

4.12 Minimising Environmental Impact

4.12.1 There is currently a 'Call for Sites' being held (deadline 29th October 2010), during which time landowners and industry will be putting forward sites for consideration, plus their ideas and aspirations for future minerals and waste proposals in Kent. A broad assessment of the potential impacts associated with the sites will be carried out to assist in making decisions regarding which sites should be identified for future minerals and waste uses. This will include assessing the impacts upon sensitive locations where people live and work, as well as the possible impacts upon important features within the environment, including ecological and wildlife interests, landscape, heritage features, water and soil resources, air quality and transport systems.

4.12.2 In particular it will be important for the site selection process to consider climate change issues such as reducing carbon emissions, promoting sustainable transport wherever possible and adapting to the effects of climate change. This process will form a part of the Sustainability Appraisal which will be carried out at the same time as the assessment of options for delivering the Core Strategy. The aim of ensuring that environmental impacts upon all sensitive receptors are minimised will be a very important consideration in the site assessment process.

4.12.3 A key concept in ensuring that environmental standards in new sites improve as technological advancements occur, is that of NEWT (Not Environmentally Worse Than existing). It is proposed to establish baseline information in relation to existing

minerals and waste operations and facilities in Kent. This baseline information will be used as the minimum standard expected of any new facilities, with a requirement to ensure continual improvements in environmental performance for all new proposals.

Question 18

Do you agree with the setting of baseline (existing) environmental performance levels in order to require all new facilities to improve on existing environmental performance?

4.13 Extensions & Minimum Sizes of New Mineral Sites

4.13.1 National minerals policy suggests that often extensions to existing sites give advantages over opening up new sites. This is because the plant, other infrastructure and access road systems are already constructed and markets have been developed for the products.

4.13.2 However, favouring extensions should not be considered in all circumstances, in particular it should not cause the MWDF to lead to concerns over anti-competitiveness.

4.13.3 Mineral extraction can create environmental issues in relation to noise, dust, lorry movements as well as disturbance to the environment. Whilst these disturbances can be considered to be temporary for the life of the mineral working, there is normally a need to apply suitable mitigation to limit the amount of disturbance.

4.13.4 There is usually a minimum threshold level of reserves within an area above which it becomes economic to apply for planning permission and develop as a new site. Therefore, to minimise the number of local communities that are affected by future land-won mineral workings, it may be worthwhile considering a minimum size of resource for new land-won mineral sites.

Question 19

(a) Would it be better to focus new areas of mineral working at or adjacent to existing sites wherever possible, giving encouragement to extensions wherever they are acceptable in sustainability and environmental terms? Or would a mix of extensions and new sites be better?

(b) In order to minimise the number of areas that are affected by mineral working in the future, should a minimum size for new mineral workings be identified in the Core Strategy? If so, what should those sizes be (in terms of total tonnages or tonnes per annum) for each type of mineral?

4.14 Agricultural Land

4.14.1 National planning policy gives protection to the best and most versatile (Grades 1, 2 and 3a) agricultural land.[34] It requires planning authorities to seek to use areas of poorer quality land (Grades 3b, 4 and 5) in preference to that of higher quality (1, 2 and 3a), except where this would be inconsistent with other sustainability considerations. Whilst this requires planning authorities to have regard to the agricultural land quality, it is for local planning authorities to decide whether best and most versatile agricultural land can be developed, having carefully weighed the options in the light of competent advice.

Question 20

In view of high standards of soil management in quarry restoration schemes which can now be achieved by quarry operators, would it be acceptable to allocate high grade agricultural land for mineral working in the future? If so, should there be a requirement for these mineral workings to be restored back to agricultural uses?

4.15 Water Resources

4.15.1 Minerals workings have historically been big consumers of water with supplies required for mineral and secondary aggregate washing, as an essential raw material in concrete and in dust suppression uses.

4.15.2 As water supplies become more scarce, it is essential that the mineral industry ensures that suitable, sufficient mechanisms are in place to recycle process water and reduce reliance upon clean water supplies by capturing and harnessing run-off from site water wherever practicable.

Question 21

Are there any other water usage issues that should be considered here?

4.16 Enhancing the Local Environment

4.16.1 Proposals to enhance the local environment during the working of minerals and restoration, as well as those proposed as part of new waste management facilities will be important factors that will be taken into consideration as part of the site assessment process.

34 Communities and Local Government (2004)Planning Policy Statement 7: Sustainable Development in Rural Areas.

Question 22

Should there be restoration targets for all land-won mineral sites? For example, a specified number of metres of hedgerow planted per hectare of land, or a minimum proportion of each site restored to enhance biodiversity interests, and/or a requirement to provide a certain amount of public access to the site restoration?

5 Key Waste Issues

5.1 National Policies

5.1.1 The National Waste Strategy (NWS) 2007 provides direction for the management of waste, and therefore influences the content of waste development frameworks. It establishes the key aim of reducing "*waste by making products with fewer natural resources*". The Strategy introduces a sequential[35] approach to waste management (the "waste hierarchy") to maximise the use of waste as a resource, and minimise carbon emissions. Waste should as first priority be reused and then recycled or composted, followed by energy recovery. Only as a last resort should waste be sent to landfill.

5.1.2 The Strategy sets out national targets for waste, including a reduction in the amount of household waste sent to landfill, and targets for increased recycling, composting and recovery of municipal waste. The Government's key objectives, outlined in the National Waste Strategy 2007[36] are to:

- decouple waste growth (in all sectors) from economic growth and put more emphasis on waste prevention and re-use
- meet and exceed the Landfill Directive diversion targets for biodegradable municipal waste in 2010, 2013 and 2020
- increase diversion from landfill of non-municipal waste and secure better integration of treatment for municipal and non-municipal waste
- secure the investment in infrastructure needed to divert waste from landfill and for the management of hazardous waste; and
- get the most environmental benefit from that investment, through increased recycling of resources and recovery of energy from residual waste using a mix of technologies.

5.1.3 Planning Policy Statement 10 sets out the Government's national policies for waste land use planning in England which should be taken into account by waste planning authorities in the preparation of their Local Development Documents. A step change in the way waste is handled and significant new investment in waste handling facilities are envisaged.

35 Sequential approach to waste management means the waste hierarchy of Reduce, Reuse, Recycle, with disposal at the bottom.

36 Department for Environment, Food and Rural Affairs (2007) National Waste Strategy. pp.11-14.

5.1.4 On 15th June 2010, the Secretary of State for the Department of Environment, Food and Rural Affairs (DEFRA) announced that the government would undertake a full review of waste policy in England.[37] This review embraces a change to the waste hierarchy to one now showing Prevention, Preparing for reuse, Recycling, Recovery and Disposal. The ambition is to work towards a zero waste economy.

5.2 The Development Plan

5.2.1 Kent County Council is the Waste Planning Authority (WPA) for Kent, and the Waste Disposal Authority for the municipal waste collected by the 12 district and borough councils. These are distinct roles, and the purpose of the MWDF with regard to waste is to make provision for the land required for the collection, processing and disposal of all types of waste that are generated in Kent.

5.2.2 The current policies for development of waste land uses are provided by the Kent Waste Local Plan 1998, and the South East Plan adopted in May 2009. These two documents comprise the "Development Plan" for waste. The MWDF will replace the Waste Local Plan, and in view of its age this consultation document does not seek detailed views on the continuing relevance of the Local Plan's approach or policies.

5.2.3 The South East Plan provided targets for the quantity and management of waste streams, but these need to be updated in the light of more recent data and trends. Unlike the Plan's land-won aggregate policies, no formal review has taken place to provide a reliable basis for waste planning in Kent.

5.2.4 Planning Policy Statement 10 sets out the Government's national policies for waste planning in England and allows that where circumstances have changed significantly or there is important new information, revisions to RSS targets should take place in the context of monitoring reports and advice. This is pertinent to Kent where waste volumes and local circumstances now differ from some of the forecast assumptions in the South East Plan.

5.2.5 On 6th 2010 the Government confirmed that all Regional Spatial Strategies (RSS) are to be abolished, and the loss of the South East Plan could cause uncertainty about the quantities of waste for which the Kent MWDF should provide. However, the South East Plan is consistent with national policy and planning guidance, which establish a number of principles for the management of MSW and other waste streams. The Kent MWDF must also comply with these policies, notably to:

- reduce the growth of waste to below that of the economy
- meet and exceed the Landfill Directive diversion targets for biodegradable MSW
- secure better integration of treatment for municipal and non-municipal waste
- secure the investment in infrastructure needed to divert waste from landfill

37 DEFRA (2010) Review of Waste Policies. Call for Evidence.

- get the most environmental benefit from that investment, through increased recycling and recovery of energy from residual waste
- drive waste up the waste hierarchy and address waste as a resource, looking to disposal as the last option but one which must be adequately catered for, and
- enable waste to be disposed of in one of the nearest appropriate installations.

5.2.6 The council therefore proposes that the MWDF should conform with national policies and should test the forecasts and waste management targets in the South East Plan. It should explore alternative assumptions that reflect the situation in Kent. This report seeks views on the main assumptions for the volumes and management of wastes on which the MWDF will be based.

5.2.7 National waste policy requires the county council to make provision for the waste that is generated in Kent. The South East Plan adopted this approach (Policies W4 and W7) but recognised the need for a degree of flexibility in applying "self sufficiency", and requires WPA's to also provide capacity for a declining amount of London's waste, and WPA's should collaborate in making provision for potential flows across boundaries (Policy W4). The Plan recognises that a small number of large scale, specialist facilities will be required for hazardous wastes, and these would serve a much wider area than a WPA.

5.2.8 The cross border movement of waste to and from facilities in Kent and neighbouring areas is generally not controlled by existing planning consents. A degree of flexibility in making provision for new capacity in Kent may be appropriate, case by case, especially where large scale or specialist facilities are proposed.

Question 23

Do you agree that the MWDF should:

(a) Test the implications for Kent of the waste targets in the South East Plan and also explore an alternative assumptions?

(b) Consider a degree of flexibility in the cross border movement of waste where this can be justified?

5.3 Waste Reduction

5.3.1 National policy is to reduce the amount of waste created. The MWDF Core Strategy should both inform and in turn be informed by the *Kent Joint Municipal Waste Management Strategy (JMWMS)*[38] which sets out the policies of the council

38 Kent County Council (2007) Kent Joint Municipal Waste Management Strategy.

as the Waste Disposal Authority and Kent district councils as Waste Collection Authorities. The JMWMS will be reviewed in 2010/11 in the light of emerging legislation and national policies.

5.4 South East Plan Targets and Kent Forecasts

5.4.1 The South East Plan contained the following waste management targets:

- Policy W3: to provide for declining annual quantities of London waste in Kent and Medway.
- Policy W5: to divert annual quantities of waste in the South East from landfill, reaching 68% of all waste by 2025.
- Policy W6 : to recycle or compost annual quantities of waste in the South East, reaching 60% of MSW, 65% of C&I waste, and 60% of CDE waste by 2025.
- Policy W7: to manage annual quantities of waste in Kent and Medway, reaching 1,221,000 tonnes of MSW and 2,663,000 tonnes of C&I waste by 2025.

5.4.2 Kent County Council have commissioned a waste *Needs Assessment*[39] (the Jacobs report) which forecasts waste quantities in Kent and assesses the additional waste management capacity needed to meet national and regional targets. The higher of Jacobs' forecasts are based on South East Plan growth rates and waste management targets.

5.4.3 However, alternative waste management assumptions have been made for MSW to reflect circumstances in Kent. The options suggested in this report for the type of MSW and C&I waste management capacity that will be appropriate in response to government policies would also provide the long term flexibility in land provision that Planning Policy Statement 12 requires.

5.4.4 Jacobs' forecasts are to 2026, but the horizon of the Kent MWDF has been extended to 2030. A second stage of the *Needs Assessment* will therefore be undertaken at the end of 2010, which will extend the forecasts to 2030, incorporate new data, and take into account the response to this consultation.

5.5 Existing Waste Management Facilities in Kent

5.5.1 MSW and C&I waste is sent to different types of facility for recycling, reprocessing, treatment or disposal, and the estimated current waste capacity is summarised in table 6 below. The estimates were based on the Environment Agency records of the maximum permitted volume at licensed facilities. They exclude hazardous landfill which will be dealt with in the Hazardous Waste Topic Report.[40]

39 Jacobs (May 2010) "Needs Assessment Modelling Technical Report".
40 Kent County Council (2010) Topic Report "Hazardous Waste."

Table 6 KCC Estimates of 2009 Capacity (rounded to 1,000 tonnes)

Source	Recycling (per annum)	Composting (per annum)	Treatment/ Other Recovery (per annum)	Non Hazardous Landfill Void
MSW	509,000	85,000	450,000	5,349,000
C&I	674,000	107,000	576,000	
Sub Total	*1,183,000*	*192,000*	*1,026,000*	*5,349,000*
CD&E	2,128,000[41]			24,352,000
Hazardous			109,000	2,578,000
Total	**3,311,000**	**192,000**	**1,135,000**	**32,279,000**

5.5.2 Kent County Council have generally assumed that the maximum permitted (i.e. licensed) capacity of facilities will be available. This includes some capacity with planning permission but not yet built, existing but not fully used, or used in part for waste from outside Kent.

5.5.3 Some facilities are able to handle more than one waste stream, and in particular MSW and C&I waste may be able to use the same recycling, composting, recovery or landfill sites. The future capacity needed for these two waste streams is therefore assessed in combination.

Question 24

Are the capacities assessed by Kent County Council for MSW and C&I waste accepted as the basis on which to plan for additional provision in the MWDF?

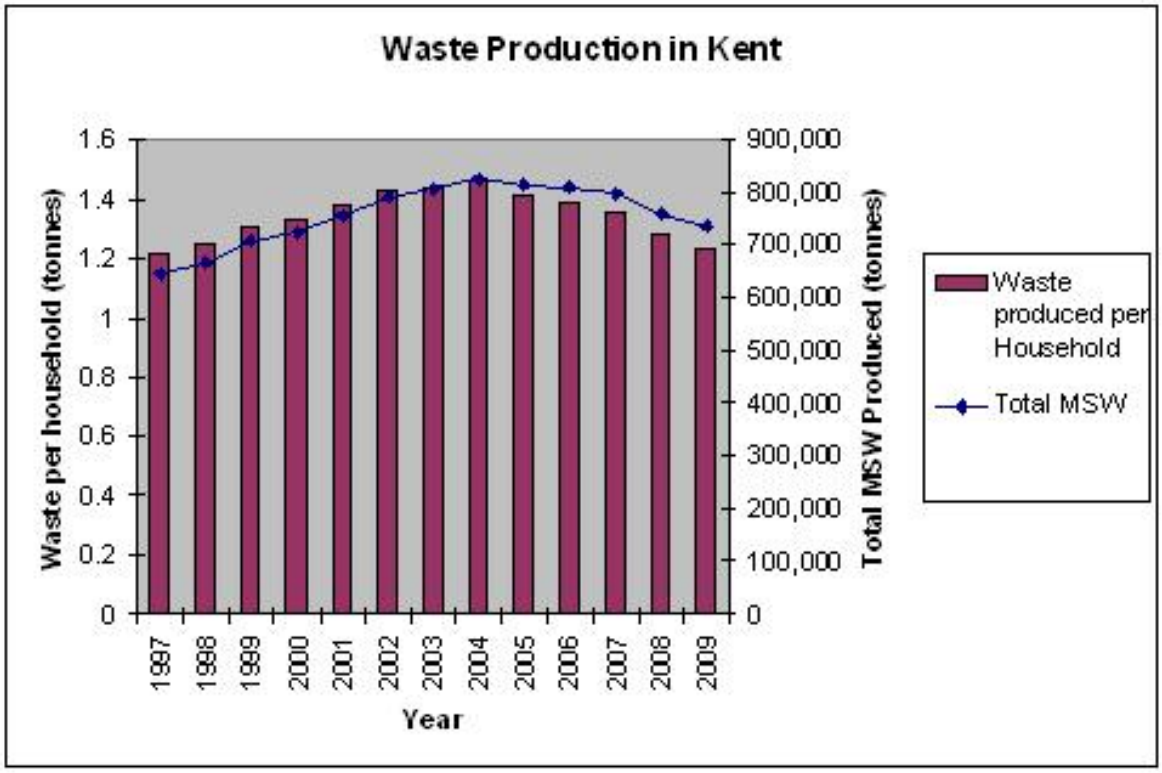
5.6 Making Provision for MSW

The Volume and Management of MSW

5.6.1 The volume of MSW in Kent reached a peak in 2004 but has since declined by 8.7%, to 736,000 tonnes in 2009. Landfill has been the main means of disposal, but this declined from 79% of the total in 2002-03, to 32% in 2009. The decline in landfill was initially due to increased recycling, but has been accelerated by use of the new Allington energy from waste plant near Maidstone which took 29% of Kent MSW in 2009.

41 CDE recycling capacity of 2,128,000 tonnes excludes mobile crushers.

Figure 19: Municipal Solid Waste (MSW) Arisings in Kent



5.6.2 The Allington plant has capacity to incinerate 500,000 tonnes of waste per annum, producing up to 35 megawatts of electricity for the National Grid. Kent County Council has contracts to send at least 300,000 tonnes of MSW to Allington for incineration until 2026, and 25,000 tonnes of green and kitchen waste to a new In Vessel Composting (IVC) plant at Blaise Farm, which has planning consent for 100,000 tonnes from Kent and neighbouring areas. The county council Waste Management Unit (WMU) anticipate that with some additional recycling and composting capacity landfill will take only 9% of Kent MSW in 2026/27.

Allington Energy from Waste Plant

5.6.3 WMU commissioned ERM Ltd.[42] to assess the carbon footprint of Kent's municipal waste management and how it will change with use of the Allington energy from waste plant. The assessment uses the Environment Agency's "Waste and Resource Assessment" tool (WRATE) and concludes that the carbon generated by collection, transportation, and the use of transfer stations are relatively insignificant compared to the savings from recycling, composting, energy from waste and reduced landfill.

Question 25

(a) Is there agreement that the most significant savings in carbon emissions can be achieved by recycling & composting, the recovery of energy from waste and the reduction of waste sent to landfill?

Forecasts of New MSW Capacity Needed

5.6.4 Jacobs forecasts of the additional MSW management capacity needed are based on the actual volume of 760,000 tonnes in 2008. This is less than the 800,000 tonnes estimated for the South East Plan, which does not anticipate the decline in the volume that has taken place in recent years.

42 ERM Ltd. (2009) "Carbon Footprint Study of KCC Waste Management System."

5.6.5 A lower forecast of MSW growth was provided by the WMU[43] and reflects their view of continuing short term decline in arisings, followed by gradual longer term growth as household numbers increase. A higher growth rate was taken from the South East Plan, Policy W7, which provided quantities of waste to 2025.

Table 7 Higher and Lower Growth Rates for MSW

Source	2008	2011	2016	2021	2026
SE Plan - Policy W7	2.5%	2.0%	1.5%	1.5%	1.5%
KCC Waste Management Unit (Nov.2009)	-4.87%	0.00%	1.00%	1.75%	2.00%

5.6.6 The forecast tonnages of MSW to 2026 are as follows:

Table 8 Projected Tonnages of MSW (rounded to 1,000 tonnes)

Waste Stream	Source	2008	2011	2016	2021	2026
MSW	SE Plan - Policy W7 (High Growth)	760,000	814,000	895,000	964,000	1,038,000
	KCC WMU – Oct. 2009 (Low Growth)	760,000	700,000	722,000	770,000	848,000

5.6.7 The majority of Kent MSW goes to licensed waste facilities, although some is sent direct to industrial sites, such as manufacturers of recycled paper, that are not licensed as waste facilities. The forecasts examine alternative waste management assumptions for the future:

- The first was based on South East Plan targets for higher diversion of waste from landfill and increased recycling and composting (Policies W5 and W6).
- The second was provided by Kent County Council WMU and reflects the current management of MSW in Kent.

Table 9 MSW Management RoutesJacobs May 2010 "Needs Assessment Modelling Technical Report"

Source		2008	2011	2016	2021	2026
South East Plan (High Recycling)	Recycling/Composting	34%	42%	51%	56%	60%

43 Kent County Council Waste Management Unit (November 2009), updated March 2010.

	Other Recovery (excluding recycling/ composting)	8%	14%	25%	27%	24%
	Landfill	58%	44%	24%	17%	16%
KCC WMU (Low Recycling)	Recycling/ Composting	42%	44%	46%	46%	50%
	Other Recovery (excluding recycling/ composting)	14%	42%	44%	44%	41%
	Landfill	44%	14%	10%	10%	9%

5.6.8 The South East Plan envisaged that "other recovery", which is principally energy from waste, will account for only 24% of MSW by 2026, and that recycling/composting will rise to 60%. However, KCC WMU envisage more than 40% of Kent MSW being sent to Allington from 2010. 50% of Kent's MSW will be recycled or composted by 2026. Only 10% will need to be sent to landfill by 2016. Kent also has much more capacity for recycling than composting and the forecasts adjust this balance by sending waste to compost.[45] We invite views from the waste industry, local authorities and others on the appropriate waste management assumptions for the Kent MWDF.

Question 26

(a) Growth forecasts for MSW 2008-2026 lie within range of 88,000 tonnes (+12%) to 278,000 tonnes (+36%). Should the MWDF plan on the basic of:

- **The county council WMU forecast of +12% as a realistic view?**
- **Or, the higher forecast of +36% as a more flexible, long term view?**
- **Would some other point with (or outside) this range be the appropriate basis for future planning and why?**

(b) In 2008, 42% of Kent MSW (including hardcore) was recycled or composted.

- **Is the KCC WMU forecast of 50% by 2026 a realistic target on which the MWDF should be based?**
- **Or, is the South East Plan target of 60% achievable with measures such as the separate collection of green and kitchen waste?**

45 Jacobs (May 2010) "Needs Assessment Modelling Technical Report" Table 3G.

New Capacity Needed for MSW Alone

5.6.9 The forecasts conclude that for MSW alone between 47,000 tonnes and 183,000 tonnes of additional composting capacity will be needed in Kent by 2026. No additional recycling is required if the emphasis is placed on new composting capacity for MSW, and no additional energy from waste capacity. Because the Allington energy from waste plant will take more than 40% of Kent MSW, it is unlikely that the higher end of the composting range would be needed.

5.6.10 These conclusions are broadly consistent with those of the WMU, which foresees the need for additional processing capacity of 70,000 to 90,000 tonnes. The future collection method will influence the type and scale of capacity, but a combination of facilities will be needed. This could include a dry recycling facility (MRF) and composting capacity in the form of in-vessel composting for green & kitchen waste or anaerobic digestion for energy recovery from biodegradable waste.[46] New capacity should ideally be located in East Kent to reduce transport distances.

5.6.11 The WMU advises that Allington in full operation will take Ashford's waste for the foreseeable future, and there is a clear case for a new transfer station at Ashford to bulk waste for transport to Allington.

Question 27

(a) Does the MWDF need to make provision for additional facilities for the collection or transfer of MSW, and if so in which locations?

(b) Is there agreement that the additional capacity needed for MSW is primarily for biodegradable waste?

(c) Should additional capacity for MSW be located in East Kent?

5.7 Making Provision for Commercial and Industrial (C&I) Waste

The Volume and Management of C&I waste

5.7.1 There is little reliable data about C&I waste and the MWDF must rely on estimates. C&I waste is more varied than MSW, and includes chemical, metallic and mineral wastes, which require different treatment or disposal. Mixed and non-metallic wastes have most in common with MSW, and account for 55% of the total. They include paper, plastics and biodegradable matter:

46 Open air windrowing normally suffers from issues with bioaerosols and therefore is not likely to be an acceptable solution.

Table 10 Estimates of Kent C&I Waste Types. 2008 ADAS model output for Kent waste provided by East of England RTAB (April 2010).

	Animal & vegetable waste	Chemical wastes	Common sludges	Discarded equipment	Health care	Metallic wastes	Mineral wastes	Mixed wastes	Non metallic wastes	Total
Tonnes	72,700	254,500	281,300	10,900	15,300	55,500	143,800	534,100	333,800	1,701,800
%	*4.3*	*15.0*	*16.5*	*0.6*	*0.9*	*3.3*	*8.4*	*31.4*	*19.6*	*100.0*

5.7.2 The lack of an up to date measure of the volume of C&I waste adds to the uncertainty about the new capacity to be provided by the MWDF:

- An Environment Agency survey of 2002/03 has a value for Kent of 1,713,000 tonnes which was the basis of the South East Plan.
- Cambridge Econometrics have estimated a lower value for Kent of 1,206,000 tonnes in 2006, but also suggest there was little change since 2002/03.
- An estimate can be made of 917,000 tonnes of Kent C&I waste sent to licensed facilities only in 2008.[47] However, because of the downturn in industrial and commercial activity in 2008 this value may not be representative of the arisings for which the MWDF should make provision.

5.7.3 The forecasts for the Kent MWDF use the estimate of 1,206,000 tonnes in 2006, but on a provisional basis because it may be an underestimate.

5.7.4 The C&I Topic Report suggests that if only 917,000 tonnes of C&I waste were sent to licensed facilities in 2008, then at least 300,000 tonnes were sent to recycling and recovery facilities that do not need a waste management licence. This capacity would be in addition to Table 6 and suggests there is already more than sufficient capacity to divert 86% of C&I waste from landfill, as required by the South East Plan.[48]

5.7.5 The Environment Agency is currently examining the volume of C&I waste that uses unlicensed facilities, and a new survey of C&I waste arisings commissioned by DEFRA is expected at the end of 2010. Kent County Council intends to commission updated forecasts that will take this information into account. Meanwhile we seek the advice of the waste industry and others on the appropriate values for C&I arisings and waste treatment capacity to adopt in the MWDF.

47 EA Waste Interrogator 2008. Factored to 100% from a value of 642,000 tonnes from a 70% sample.

48 KCC "C&I Waste Topic Report", para. 4.4.3 & 4.5.3.

Forecasts of New C&I Waste Capacity Needed

5.7.6 The forecasts for the Kent MWDF take the South East Plan growth rate as the higher level of the range for C&I waste, and zero growth as the lower level. Zero growth would represent future success in the reduction of waste – "decoupling" waste from economic growth.

Table 11 Higher and Lower Growth Rates for C&I Waste

Source	2008	2011	2016	2021	2026
SE Plan - Policy W7	2.5%	2.0%	1.5%	1.0%	1.0%
KCC Assumed	0	0	0	0	0

5.7.7 The tonnages of C&I waste forecast to 2026 are as follows:

Table 12 Projected Tonnages of C&I waste (rounded to 1,000 tonnes)

Waste Stream	Source	2008	2011	2016	2021	2026
C&I	SE Plan - Policy W7 (High Growth)	1,267,000	1,358,000	1,492,000	1,599,000	1,681,000
	KCC Assumed (Low Growth)	1,206,000	1,206,000	1,206,000	1,206,000	1,206,000

5.7.8 The views of the waste industry and others are invited on the growth of C&I waste because it has a significant bearing on the new capacity needed in Kent.

Question 28

a) Is there further evidence to inform the county council of the appropriate measures of C&I waste arisings and the capacity available?

(b) Should the MWDF use the lower estimate of about 1.2 million tonnes of C&I waste now produced in Kent, or adopt a value closer to the Environment Agency survey result of 1.7 million tonnes in 2002/03?

(c) Is there further evidence to confirm the volume of C&I waste using unlicensed facilities, and should the MWDF include provision for such facilities?

5.7.9 In view of the lack of analysed data on the management of C&I waste, the forecasts examine only the South East Plan targets for the future management of C&I waste, as follows:

Table 13 South East Plan C&I Waste Management Routes

	2008	2011	2016	2021	2026
Recycling/Composting	46%	51%	56%	61%	65%
Other Recovery (excl. recycling/ composting)	15%	16%	20%	21%	19%
Landfill	39%	33%	24%	18%	16%

5.7.10 However, these are regional targets that may not be appropriate to individual Wast Planning Authorities because local management will reflect the availability of particular capacity. For example the South East Plan assumes that by 2025 the proportion of C&I waste sent to "other recovery", which includes energy from waste, increases from 15% to 19%. This is a relatively small change, and the scope for a greater increase in the use of energy from waste could be considered. Accordingly, KCC seeks the advice of the waste industry and others on the management targets for C&I waste to adopt in the MWDF.

Question 29

(a) What growth in C&I waste from 2008 to 2026 should the MWDF provide for?

- **Is zero growth preferred as a reflection of policy to reduce waste in a growing economy**
- **Or, does the South East Plan forecast of +33% provide the basis for a flexible, long term view**
- **Or, should another % increase in C&I waste growth be used?**

(b) Are the C&I waste management targets of the South East Plan appropriate to Kent, or should the MWDF explore alternative assumptions, particularly for energy from waste?

New Capacity Needed for C&I Waste

5.7.11 The forecasts conclude that to meet the targets of the South East Plan for C&I waste alone, between 32,000 tonnes and 311,000 tonnes of additional recycling capacity will be needed in Kent by 2026. No additional composting nor "other recovery" capacity, notably energy from waste, is required. However, the following section considers the need for investment in combination with MSW, and to meet waste management targets that differ from those in the South East Plan and would be more appropriate to Kent.

5.8 Facilities Needed for Diversion from Landfill of MSW and C&I Waste Combined

5.8.1 Because the recycling, composting and energy recovery of MSW and C&I may take place in the same facilities, the forecast need for new capacity for both waste streams in combination is considered.

Forecast Need for Additional Capacity

5.8.2 In summary, the forecasts suggest a range of additional capacity is needed to provide for Kent's MSW and C&I waste to 2026. To ensure long term flexibility the MWDF should consider the higher forecasts:

- Recycling capacity to treat 32,000 to 311,000 tonnes per annum of commercial and industrial waste. This could be provided by:
    - A single small Material Recovery Facility (MRF) for the low forecast or 2 large MRFs, such as that at Allington, for the high forecast.
    - Alternatively, the high forecast could be met by a mix of smaller MRF and other processes, such as Mechanical and Biological Treatment (MBT).
- Composting capacity to treat 47,000 to 183,000 tonnes per annum of MSW could be provided by:
    - A single In Vessel Composing plant (IVC) for the low forecast, or two large IVC such as Blaise Farm for the high forecast.
    - Alternatively, the high forecast could be met by a mix of IVC, Anaerobic Digestion, and open windrow composting.
- The forecasts suggest no additional "other recovery" capacity is needed, which includes energy from waste.

5.8.3 There are considerations in addition to the forecasts of recycling, compost and "other recovery" capacity to take into account. The Topic Reports give the following additional perspectives on the likely requirement to ensure that the MWDF provides long term flexibility.

Providing Long Term Flexibility for Recycling and Composting

5.8.4 The C&I Waste Topic Report suggests that because a large amount of C&I waste is sent direct to unlicensed facilities, such as industrial processes that recycle waste, the waste industry is unlikely to invest in new, large scale recycling capacity. Instead, Kent will require additional composting capacity for about 250,000 tonnes of C&I waste per annum because of increasing landfill tax and a possible ban on landfill of biodegradable waste. This will be in addition to the need for more capacity to compost MSW, although facilities may be used for both waste streams. We are therefore consulting on the scale and balance of recycling and composting capacity that will be required.

Question 30

(a) The forecast range of additional recycling capacity needed is from only 32,000 tonnes per annum, to 311,000 tpa mainly to recycle more C&I waste.

- **Should the MWDF consider the existing facilities as ample, and make no provision for additional recycling capacity?**
- **Or, should the MWDF provide long term flexibility through an additional 300,000 tpa capacity?**

(b) The forecast range of additional composting capacity needed is for MSW waste, from 47,000 to 183,000 tonnes per annum.

- **Should the MWDF provide for additional capacity to compost green and kitchen MSW, up to about 200,000 tonnes per annum?**
- **Should the MWDF in addition provide long term flexibility to compost more biodegradable C&I waste?**

5.8.5 If substantial new capacity for recycling and composting were provided, the MWDF should indicate the number and location of such facilities. Early indications from engagement with stakeholders are that East Kent is the preferred location for new capacity for MSW, and the large scale recycling facilities used for MSW are not best suited to the variety of material among C&I wastes. We therefore seek advice on the mix and location of capacity that will be required.

Question 31

(a) If the MWDF were to provide for about 300,000 tpa additional recycling capacity, should it:

- **Seek one or two large Material Recovery Facilities (MRF), or a greater number of smaller facilities to deal with the variety of C&I waste?**
- **Is it important for such facilities to be close to the greatest concentrations of arisings, for example in central Kent, or the larger urban area of North Kent?**

(b) Should the MWDF provide additional composting capacity in the form of:

- **One or two large enclosed facilities capable of composting green and kitchen waste?**
- **Or, encourage a greater number and variety of facilities, including enclosed "In Vessel Composting" (IVC), open-air "windrow" composting, and Anaerobic Digestion?**

Providing Long Term Flexibility for Energy from Waste

5.8.6 Very little incineration of Kent C&I waste occurs at present but the increasing cost of landfill, the possible ban on the landfill of some wastes, and eventually the closure of existing landfill sites, will create demand for additional recovery facilities for C&I waste. There is emerging evidence of such demand in Kent.

5.8.7 The C&I Waste Topic Report suggests that an alternative to the landfill of unsorted C&I waste is needed, to at least match the 462,000 tonnes of Kent C&I waste sent to non–hazardous landfill in 2008. The alternative provision could take the form of one large and one smaller energy from waste plant specifically for C&I waste.

5.8.8 This suggests a more progressive scenario for the management of C&I waste than in the South East Plan, in order to increase energy from waste and further reduce landfill. Large plants may seek waste from outside Kent, just as at present large volumes of waste cross boundaries to landfill and other sites. The net benefits for carbon saving and the supply of renewable energy from such cross border flows of waste should be considered. We therefore seek the advice of the waste and energy industries and others, on the mix and location of capacity that should be provided for new energy from waste capacity in Kent.

Question 32

(a) Should the MWDF provide for substantial additional capacity for energy recovery from Kent C&I waste?

- **Should it be a condition that such plant provides Combined Heat and Power (CHP)?**
- **To what extent should waste from outside Kent be permitted?**

Replacement Capacity

5.8.9 The comparison between existing capacities and the forecast waste volumes is not the only consideration for the MWDF in making provision for development of new facilities. Proposals may come forward for new waste treatment infrastructure that would take the place of existing facilities and save carbon emissions by more efficient and sustainable operation. Such proposals may increase the value of wastes as a resource because of the technology they use, and the variety and quality of their output. There may be planning or other conditions on the operation of existing facilities that also mean they should not be assumed to be available until 2030.

5.8.10 In making its land use provisions and policy the MWDF should therefore consider the nature and longevity of its existing capacity, and the wider objectives for sustainable waste management.

Question 33

(a) The Hersden (Canterbury) MRF is an old design. Should the MWDF make provision for capacity to continue at the same site, or seek an alternative location in East Kent?

(b) The Blaise Farm IVC has planning consent to 2026, linked to the life of the host quarry. Should the MWDF make provision for capacity to continue at the same site, or seek an alternative location outside the Green Belt?

(c) Are there other major facilities that will need investment or replacement for which the MWDF should make provision?

Reprocessors and Integrated Waste Management

5.8.11 Kent has a number of long established industrial sites, some of which could be suitable locations for waste land uses, such as Material Recovery Facilities (MRF) or Anaerobic Digestion. Integrated waste processing involves the location of several waste uses close to one another, possibly on one site, to provide a linked process

for various waste streams that share facilities. The integrated process maximises the use of waste as a resource, and minimises the residual waste requiring landfill, but requires a suitable site of industrial character.

5.8.12 Re-processors are users of waste, for example as a raw material in manufacture. They are likely to require accessible sites of an industrial character, and offer a potential source of new economic activity in Kent using waste as a resource. Existing Kent industries may also seek to invest in processes or energy supply that use waste as a resource, without being licensed waste premises.

Question 34

(a) Should the MWDF make provision for the location of waste uses on industrial sites in Kent?

(b) Is there potential in Kent for integrated waste processing, and new industries to process waste?

- **Which locations or sites in Kent are most suitable?**

5.9 Biomass, Agricultural Waste and Waste Water

5.9.1 Biomass, agricultural waste and waste water are considered together because of the potential to treat these together, possibly on a small, local scale. Biomass plant are restricted in the nature of the material that can be used as fuel, and would not use general C&I wastes without pre-treatment.

5.9.2 “Biomass” includes waste wood from industry, forest products, straw, and animal slurry etc. Biomass has a lower energy density than fossil fuels and therefore greater volumes are required than fossil fuel.

5.9.3 Dry biomass, such as wood and straw, is suitable for incineration and can be mixed as a fuel supply. Because the carbon emissions from the transport of biomass are typically quite a small proportion of the total emissions, it may be both economic and sustainable to transport dry biomass some distance. Potentially biomass can be used for Combined Heat and Power (CHP) in an urban setting, if a high proportion of the heat generated can be used.

5.9.4 “Wet” biomass wastes are less easily transportable and provide a more local resource. They are typically agricultural waste, digestible waste from industry, and food waste, which accounts for about 17.5% of MSW. “Wet wastes" can be digested by anaerobic digestion, releasing methane which can be collected to form a biogas, and used for power generation. The wet waste streams are also suitable for mixing, and can include sewage sludge.

5.9.5 The economics of anaerobic digestion have not been particularly favourable, but will be improved by recent policy initiatives, and the new government is committed to greatly increase energy from waste specifically using this technology.

Agricultural Waste

5.9.6 Slurry, manure and other natural products (with the exception of milk) are not classified as waste when they are used as a fertiliser, and the majority of such waste is used in situ on farms. Jacobs estimate that approximately 488,000 tonnes of natural agricultural waste is produced in Kent annually. It is likely that proposals will come forward for facilities to manage this and other biomass waste. These might include the anaerobic digestion of biomass to produce biogas, and the treatment of manure and slurry by composting.

5.9.7 The number and scale of such proposals will depend in part on their viability. They may be relatively small in scale such that a number might be supported in Kent, but their potential rural location may raise considerations of landscape and environmental impact, and whether the wastes treated should be confined to that produced locally or by agriculture.

5.9.8 Jacobs estimate the volume of non-natural waste from agriculture in Kent that is subject to waste management regulations as only 5,100 tonnes in 2003. Of this relatively small quantity, 3,300 tonnes were pesticide washings and sheep dip residues for which specialised hazardous waste processing is required. The remainder could form a small portion of C&I waste. Because of their small quantities, it is not intended to make specific provision for regulated agricultural wastes in the MWDF.

Waste Water and Sewage Sludge

5.9.9 Sewerage provision is the remit of the water companies rather than local authority waste collection and disposal services. The MWDF should make provision for major new capacity to treat wastewater and for sludge processing where new land and planning consent are required.

5.9.10 The sewage sludge arising from wastewater treatment works requires the provision of adequate treatment/disposal facilities, and this could include thermal treatments such as incineration and anaerobic digestion. Kent County Council are the determining authority for planning applications for these facilities and therefore the MWDF should consider the future capacity requirements.

Question 35

(a) What potential is there for energy from biomass and anaerobic digestion in Kent?

- **Should MWDF include policy to encourage biomass and anaerobic digestion proposals?**
- **Or, should it adopt or more cautious approach, setting criteria for environmental impact, location and the source of waste, being technology neutral?**

(b) Are there new proposals for the treatment of waste water and/or sewage sludge for which the MWDF should make provision?

5.10 The Case for Non-Hazardous Landfill

Forecast Need for Non Hazardous Landfill

5.10.1 It is European and national policy to reduce the amount of waste sent to landfill. However, some MSW and C&I waste will continue to be sent to landfill because it is not suitable for other treatment processes.

5.10.2 In 2008 two non-hazardous landfill sites in Kent, Shelford in Canterbury and Greatness in Sevenoaks, had permitted space for a further 5,349,000 tonnes of MSW or C&I waste. There are no planning restrictions on where this waste my come from. The forecasts of the landfill that will be required in addition to this reserve by 2026 are for space to accommodate between 7,136,000 and 14,671,000 tonnes of Kent MSW and C&I waste.

5.10.3 The higher forecast used the South East Plan target to reduce the proportion of MSW sent to landfill from 56% in 2008 to 16% by 2025. However, this takes no account of the waste treatment capacity that is in place in Kent, and that the county council Waste Management Unit (WMU) believe waste sent to landfill will fall to 9%.

Waste from London

5.10.4 South East Plan Policy W3 stated that Waste Planning Authorities should provide landfill capacity for proportions of London's MSW and C&I waste. However, Kent has handled less than 20,000 tonnes of London MSW and C&I waste in recent years, and while other less costly destinations for London waste are available it is unlikely that there would be an increase to the 158,000 tonnes per annum envisaged by Policy W3 in the period to 2015.

5.10.5 However, it is possible that when landfill sites to the east of London close there will be market pressure for increased volumes of London waste to be sent to Kent. One outcome is that Kent could maintain approximately 20,000 tonnes per annum to 2017, but receive 158,000 tonnes after that date. This would mean an additional 917,000 or 2,226,000 tonnes per annum of MSW and C&I waste sent from London to Kent for landfill. This quantity is not critical to whether or not the Kent MWDF should provide for more non hazardous landfill capacity.

Views on the Need for Non Hazardous Landfill

5.10.6 The commercial and industrial waste stream together with residual waste from other processes are mainly responsible for the forecast need for additional non hazardous landfill. This could be reduced by more provision for recovery of energy from C&I waste. Kent County Council will test the sensitivity of the forecasts of non hazardous landfill, but also seeks the views of the waste industry and others on the need for additional non hazardous landfill in Kent, and the options that may be considered.

Question 36

The forecasts suggest that additional capacity for non hazardous landfill will be required.

(a) Does the waste industry agree with this assessment?

(b) How will measures such as the landfill tax escalator and the possible ban on materials from landfill affect the industry?

(c) Is the industry willing to invest in additional capacity in Kent, or will it rely on capacity elsewhere?

(d) Are there other options that should be considered?

5.11 Making Provision for Construction, Demolition and Excavation Waste (CDE)

The Volume and Management of CDE Waste

5.11.1 The most recent national survey of CDE waste arisings was in 2005[49] and an estimate of Kent inert waste from this source was used in the South East Plan and the forecasts for the MWDF. The survey data is as follows:

49 Capita Symonds Ltd (2005) Survey of Arisings & Use of Alternatives to Primary Aggregates in England.

Table 14 Management of Kent CDE Waste Inert Waste: 2005

Management Routes	Tonnes	%
Recycled	1,481,555	54.8%
Landfilled*	927,721	34.3%
Environment Agency Exempt uses e.g. landscaping	292,001	10.9%
Total	**2,701,277**	**100%**
**Landfilled consists of:*		
Engineering at non-hazardous landfill sites	*264,787*	*9.8%*
Disposal	*662,933*	*24.5%*

Note: Excludes materials such as wood, metals and plastics etc which are included within C&I waste. Hazardous construction waste is included with other hazardous wastes later in this document.

5.11.2 The forecasts of CDE waste for the Kent MWDF adopt the assumption of the South East Plan that waste volumes are relatively stable and will not change. This does not take account of the decline in construction activity in 2009 and 2010, but does decouple CDE waste from longer term growth of the economy.

5.11.3 The forecasts also the adopt South East Plan management targets for CDE was as follows:

Table 15 South East Plan CDE Waste Management Routes

	2008	2011	2016	2021	2026
Recycling (Policy W6)	48%	50%	52%	60%	60%
Re-use (of which 61% used at exempt sites, and 39% at landfills)	34%	34%	34%	28%	30%
Landfill (Policy W5)	18%	16%	14%	12%	10%

5.11.4 In 2005 Kent recycled 55% of CDE inert waste, which exceeded the South East Plan assumption of 48%, and also disposed of more waste to landfill (25% compared to 18%). These levels may reflect the availability of more CDE recycling and inert landfill capacity in Kent than in most areas of the South East.

5.11.5 The remaining waste is re-used for landscaping etc. on development sites, which is exempt from waste licensing, or at landfill sites to cover deposited material. The MWDF need make no provision for such re-use because it is permitted as part

of other development or landfill operations. The South East Plan set a regional average of 34% for such use, but the 2005 data suggests that it was much lower in Kent, at about 21%. Applying the South East Plan values to Kent may therefore remove too much waste from the forecast need for recycling and landfill capacity. Equally, exempt sites are not subject to landfill tax, and their use has become more financially attractive as landfill tax has risen.

5.11.6 The South East Plan target was to increase recycling to 60% by 2025, but this is only 5% above the estimated rate in Kent in 2005. The Plan also aimed to reduce landfill from 18% to 10%, which is a more gradual decline than the voluntary initiative[50] to reduce the amount of CDE sent to landfill by 50% in 2012. However, in Kent it is a large reduction from the 25% of CDE landfilled in 2005. South East Plan waste management targets for CDE waste do not appear to be well suited to the situation in Kent.

Question 37

(a) Is there further evidence to confirm 2.7 million tonnes per annum as the volume of CDE waste for which the MWDF should provide?

(b) Are the South East Plan waste management targets appropriate to Kent, or should a lower proportion of "re-use" be adopted and higher recycling to reflect circumstances in Kent?

Capacity Needed for Recycling CDE Waste

5.11.7 A single forecast of the need for CDE recycling capacity has been made for the MWDF, which increases the quantity of waste from 1,248,000 tonnes in 2008 to 1,560,000 tonnes in 2026 (+312,000 tonnes or 25%):

Table 16 CDE Waste for Recycling 2008-26

	2008	2011	2016	2021	2026
CD&E	1,248,000	1,300,000	1,352,000	1,560,000	1,560,000

Source: Jacobs Table 4-A

5.11.8 The current maximum permitted recycling capacity in Kent is assessed at 2,128,000 tonnes per annum, excluding mobile crushers. On the basis of the forecasts alone there is no need for the MWDF to provide additional recycling capacity to meet South East Plan targets. However, a number of the existing facilities are located at quarries and temporary waste management facilities, which will not be available for the life of the MWDF.

50 "Construction Commitments: Halving Waste to Landfill."

5.11.9 Kent has only one site which incorporates a washing process and this may mean that the maximum capacity of facilities in Kent could not in practice be achieved. The MWDF should therefore consider whether there are parts of Kent with relatively poor access to recycling.

Capacity Needed for Inert Landfill

5.11.10 The forecast of waste sent to inert landfill falls steadily from 463,000 tonnes in 2008, to 260,000 tonnes by 2026. The current capacity of inert landfill sites in Kent could accommodate 24,352,000 tonnes, and the forecast therefore suggests there is no need for the MWDF to provide additional inert landfill capacity. However, there are other considerations that qualify this conclusion.

5.11.11 The South East Plan assumed that the share of CDE inert waste sent to landfill falls from 18% to 10%, but this understates the share sent to landfill in Kent, which in 2005 was 24% (663,000 tonnes). Although CDE waste is costly to transport, Kent is near to London where there are limited opportunities for disposal. The quantity of London's CDE waste sent to Kent and Medway has increased in recent years, to 521,000 tonnes in 2008.

5.11.12 Kent's landfill and recycling sites have no planning restriction on the origin of waste. If London CDE waste were to continue at this rate in addition to landfill of Kent's own waste, the current capacity of inert landfill sites may not be sufficient for the 2030 horizon of the MWDF, particularly if some sites expect to husband their capacity beyond 2030.

5.11.13 Approximately three quarters of the inert landfill capacity in Kent is located in Tonbridge & Malling Borough, which although accessible to Mid and West Kent is some distance from much of East Kent.

5.11.14 The "re-use" of CDE waste involves its use for development sites which are exempt from waste management license. The South East Plan forecasts assumed that the "re-use" of CDE waste on exempt sites falls from 34% to 30% but is only 21% in Kent and might not decline further. The capacity of "exempt sites" is not known and no provision for them can be made in the MWDF.

5.11.15 The Environment Agency is investigating the arisings that are dealt with at exempt sites. The conclusions of that study, plus further investigation of the practical inert landfill capacity in Kent will be included in the second sage waste forecasts.

5.11.16 We seek the views of the waste industry and others on the appropriate quantities and management assumptions for CDE waste:

Question 38

These questions have been repeated from section 4.2, please do not answer them twice.

(a) Do you agree that to continue to encourage the maximum amount of recycling of CDE wastes to provide recycled aggregates, a mix of site types for these activities should be identified and allocated?

(b) In order to encourage the maximum amount of recycling of this waste stream, do you agree that, wherever possible and acceptable in environmental terms, every quarry in Kent which needs inert fill for restoration should be encouraged to incorporate an aggregate recycling facility in its operations?

5.11.17 The introduction of Site Waste Management Plans (SWMPs) will increase the volume and quality of CDE waste for recycling. We also seek views on the best means to encourage recycling of CDE waste:

Question 39

(a) Is the current capacity in Kent for inert landfill sufficient to 2030, based on the likely volume of Kent waste?

- **Or, is there a need for new capacity to provide long term flexibility, and to provide sites accessible to all parts of the county, notably East Kent?**

(b) Should additional inert landfill only be acceptable when it directs the available inert fill to priority quarry restoration projects which need the fill for landscape or geotechnical (stability) purposes?

5.12 Making Provision for Hazardous Waste

South East Plan Regional Studies

5.12.1 The South East Plan did not require Waste Planning Authorities (WPAs) to provide for the amount of hazardous waste that arises in their area, but stated that provision will be required for a small number of large-scale specialist facilities. Policy 15 stated that priorities include hazardous landfill capacity to serve the south and east of the region, treatment facilities for air control residues (flue ash), treatment of waste electronic and electrical equipment (WEEE) and a network for treatment of contaminated construction and demolition waste.

5.12.2 The South East Plan encouraged waste development plan documents to identity and safeguard sites for contaminated construction soils and demolition waste, and to identify criteria for large scale hazardous waste facilities, which should be located and designed to make use of rail or water transport. Where necessary, development plan documents should encourage the creation of protective cells for hazardous waste at landfill sites.

5.12.3 A report produced by Scott Wilson for SEERA[51] reviewed hazardous waste arisings in the South East and forecast future management requirements for the types and quantities of waste arising in the region. Most hazardous waste is produced by industry and Scott Wilson assumed hazardous waste would grow at the rates for C&I waste in the South East Plan (Policy W7) and the National Waste Strategy 2007, which are very similar.

5.12.4 The Scott Wilson report states that complete self-sufficiency at a regional level is not practical for hazardous waste because cross-border movement is substantial in terms of the amount of waste and the distances travelled to infrastructure elsewhere in England and Wales. The report identifies likely additional hazardous landfill locations as restricted to the counties of Buckinghamshire, Oxfordshire and Kent within areas which have suitable geology.

Question 40

Do you agree that:

(a) Provision for hazardous wastes in Kent should not be based on self-sufficiency or the average growth of industrial waste?

(b) The MWDF should consider the future of the main hazardous waste sites in Kent?

(c) The MWDF should consider the need for the regional priorities of hazardous landfill capacity, and treatment of air control residues, WEEE, and contaminated construction waste?

Hazardous Waste in Kent

5.12.5 Kent has existing or planned provision for facilities that contribute to providing for each of the regional priorities, and can make a substantial contribution to providing for its own hazardous waste and the regional networks.

5.12.6 Hazardous waste is carefully regulated and data held by the Environment Agency provides a reliable measure of the amount produced in Kent and its destination. It is varied in nature and requires specialised treatment and disposal.

51 Scott Wilson (April 2009) Study into the Arisings & Management of Hazardous Waste in the South East Region.

Consequently there is considerable movement of hazardous waste across WPA and regional boundaries, and this is illustrated by the hazardous waste produced in Kent in 2007:

Table 17 Hazardous Waste Flows: Kent 2007

	Tonnage
Hazardous waste arising in Kent	144,000
Hazardous waste imported to Kent	89,000
Hazardous waste exported from Kent	115,000
Hazardous waste landfilled in Kent	118,000

5.12.7 In 2007 Kent produced 144,000 tones of hazardous waste, but of this 115,000 tonnes (80%) left the county, and 89,000 entered Kent. Hazardous waste leaving Kent included waste sent to a site in south east London that accepts contaminated excavation wastes, and to a landfill site in the South West which accepts a wide range of wastes. Hazardous waste entering Kent was mainly from London, the East of England, and the remainder of the South East, and was also largely to landfill sites.

5.12.8 Consequently only a small proportion of the 118,000 tonnes of hazardous waste landfilled in Kent originated in the county. The two main hazardous waste landfill sites in Kent accept asbestos from a wide catchment, and flue ash from Allington.

Growth in Hazardous Waste and its Management

5.12.9 The South East Plan recognised that European legislation will direct waste away from landfill while requiring greater waste treatment and pollution control. The European Hazardous Waste List will define more types of waste as hazardous for the first time.

5.12.10 Jacobs have projected the current pattern of hazardous wastes treated and disposed in Kent on the assumption that they grow at rates similar to those modelled for C&I waste. However, this approach is not recommended as the basis for provision for hazardous wastes in the MWDF. Provision for hazardous waste in the MWDF requires consideration of the particular waste infrastructure and circumstances in Kent.

Residues from Waste Treatment

5.12.11 The South East Plan noted that there will be an increase in residues from waste treatment such as energy from waste (para. 10.49), some of which will require disposal as hazardous waste. Jacobs have made forecasts of hazardous residues in Kent on the basis of alternative technologies for the treatment of MSW and C&I

waste. From 2008 to 2026 between 400,000 and 1,600,000 tonnes of flue ash could require hazardous landfill. The highest amount would be produced by the combination of high growth rates and the use of Allington and similar incineration plant.

5.12.12 It would be consistent with the principles of the waste hierarchy if residues were recycled or reused in preference to landfill, for example as a raw material in the manufacture of construction products. However, this would require investment in a suitable manufacturing process in Kent or elsewhere, and cannot be relied upon.

5.12.13 It is evident that self sufficiency is not practical for hazardous wastes even at the scale of the region, and that movement of waste to and from Kent will continue. The MWDF may however, seek to limit and balance such movements through the provision that it makes for new infrastructure. Residues produced by the Allington plant are primarily from Kent's MSW for which the MWDF should make provision. However, new energy from waste or other treatment capacity for C&I waste could involve waste from outside Kent, and the MWDF must consider the provision for its disposal.

5.12.14 We therefore seek the views of the waste industry and others on the principles that should be adopted by the MWDF on the treatment or disposal of residues:

Question 41

Should the MWDF:

(a) Make provision for the reuse or recycling of residues in preference to landfill if this is a practical alternative?

(b) Make provision as necessary for landfill of the main residues from treatment of Kent's MSW?

(c) Require that provision is made for the disposal of residues from new capacity for the treatment of other wastes that takes place in Kent?

Landfill for Incinerator Ash in Kent

5.12.15 The MWDF must assess the permitted capacity of the existing hazardous landfill for incinerator ash in Kent, and the implications of increased production of such residues in Kent. Norwood Farm on the Isle of Sheppey was granted planning permission in 2005 to accept the hazardous ash from Allington, which could produce about 40,000 tonnes each year when fully operational. The heavier bottom ash is not hazardous and is reused.

5.12.16 Norwood Farm is a source of clay used for engineering purposes. One of the conditions of the planning permission to accept Allington's flue ash[52] is that the site must be restored by 2016, and therefore provision must be made for the disposal of Allington's ash after that date. If reuse of the ash were not practical, the options include landfill by an extension to the Norwood site, seeking a new site in Kent, or relying on landfill elsewhere, if a suitable site exists.

5.12.17 The question also arises whether the MWDF should consider Norwood for a wider role in the disposal of residues from the treatment of wastes in Kent, in addition to that from Allington.

Question 42

If reuse or recycling of flue ash is not a practical option, should the MWDF consider whether:

(a) The site at Norwood could be extended to accept Allington flue ash to 2030?

(b) It could be extended to accept residues from other new waste treatment to be provided in Kent?

(c) Or, if alternative sites in Kent could be identified?

Landfill for Asbestos Waste

5.12.18 The second hazardous landfill in Kent is Pinden Quarry south of Dartford which is a chalk quarry with permission for disposal of asbestos wastes. It is the only site in the South East for disposal of asbestos and therefore most of the waste comes from outside Kent.

5.12.19 The volume of asbestos for landfill depends largely on the amount found in the demolition and refurbishment of older buildings and plant, and should decline in the longer term because it is no longer used as a building and insulating material. The decommissioning of Dungeness A power station is estimated as producing 3,500 cubic meters of asbestos waste but over a period beyond that of the MWDF.

5.12.20 The Pinden site has planning permission for 837,300 cubic meters of landfill after the extraction of chalk, with a condition which requires its restoration by 2042. However, at recent rates of fill the landfill could be complete within 10 to 15 years.

52 Flue ash is the solid material remaining in the chimney as part of the air pollution control requirements.

5.12.21 In a regional context, Pinden is valuable in diverting asbestos waste from other sites that are licensed for hazardous wastes that require greater engineering protection, and thus helps to husband their capacity.

Question 43

Should the MWDF consider an extension to Pinden so that it could continue its role as an asbestos landfill until 2030?

- **Or can an alternative site be identified?**

Contaminated Soil

5.12.22 The South East Plan and the Scott Wilson report identify the need for the storage, treatment and remediation of contaminated soils and demolition waste, and the current priorities of SERTAB[53] include specialist treatment for contaminated soils.

5.12.23 The Environment Agency has supported the concept of a soil treatment centre, or hub, to serve the major brown field development sites in North Kent, notably in Thameside. However, no firm proposals have come forward. Planning permission has been granted at Nicholls Quarry near Hythe for the treatment of 1 million tonnes of soil and waste, and its use for restoration of the site prior to residential development.

Question 44

Is there a need for further provision in Kent for treatment of contaminated soil, possibly to support the regeneration of brown-field sites in Kent Thames Gateway?

Clinical Waste

5.12.24 The clinical incinerator located at Ashford is the largest of only three in the South East. Even so there is a substantial amount of health care waste which is imported to and from Kent indicating the specialist nature of clinical wastes.

Waste Electronic and Electrical Equipment (WEEE)

5.12.25 There are a number of sites in Kent for the treatment and transfer of waste electronic and electrical equipment (WEEE). Future land needs may be capable of accommodation on established industrial sites.

53 South East Regional Advisory Body for Waste.

End of Life Vehicles

5.12.26 Kent has many sites that handle End of Life Vehicles (ELV), and although there appears to be no shortage of capacity there may be economic pressures within the industry for larger sites that can provide a range of equipment and greater scope for recycling. Future land needs may be capable of accommodation on established industrial sites.

Question 45

(a) Are there proposals for additional capacity for clinical waste treatment in Kent for which the MWDF should make provision?

(b) Can the land required to recycle waste electronic and electrical equipment be provided on established industrial sites?

(c) Should the MWDF make provision for sites that recycle End of Life Vehicles, and if so what are the requirements of the industry?

5.13 Making Provision for Nuclear Waste

5.13.1 Radioactive waste is not a controlled waste as it is not covered by the Waste Framework Directive. None of the provisions of the Waste Strategy 2007 relate specifically to nuclear waste but the principle of the waste management hierarchy is pertinent to the management of nuclear waste

5.13.2 There are three broad categories of radioactive waste reflecting the degree of radioactivity and hazard:

- High Level Waste (HLW) is largely a by-product from reprocessing of spent fuel, which takes place at Sellafield in Cumbria.
- Intermediate Level Waste (ILW).
- Low Level Waste (LLW) which unlike HLW and ILW, does not normally require shielding during handling or transport. It consists largely of paper, plastics and scrap metal items that have been used in hospitals, research establishments and the nuclear industry. In future there will be large volumes of soil, concrete and steel as nuclear plants are decommissioned.

5.13.3 Kent has two nuclear power stations (Dungeness A and B) located on Romney Marsh within an environmentally sensitive area, adjacent to sites designated for their national and international environmental importance.[54] The area is vulnerable to coastal erosion, and the shingle tidal flood defences are continuously replenished to protect the nuclear site.

5.13.4 Dungeness B remains operational and there is no firm programme for its eventual decommissioning. Dungeness A is owned by the Nuclear Decommissioning Authority (NDA), and there are four phases of decommissioning:

- Defuelling - until about 2011.
- Care and Maintenance Preparations – lasting approximately 15 years, in parallel with defueling. It includes construction of an Intermediate Level Waste Store.
- Care and Maintenance – approximately 80 years. This may include transportation of all ILW from Dungeness to a new permanent storage facility to serve the UK, envisaged around 2040.
- Final Site Clearance – approximately 9 years from about 2102 and including provision of an ILW waste management facility on the site to process all waste arising from this phase.

5.13.5 In total over the three phrases, decommissioning of Dungeness A is likely to produce 140,000 tonnes of waste of which 4,400 will be ILW and 28,500 LLW with most of the remainder being inert waste. The defuelling and care and maintenance preparation stages for Dungeness A are likely to take place within the horizon of the MWDF (2030), and to be partly completed for Dungeness B.

5.13.6 Proposals for waste management uses at Dungeness that need planning permission would need to take into account the sensitive environment of the site, the coastal process and flood risk. Rigorous tests would apply (Appropriate Assessment) to proposals with any potential for adverse impact on the internationally designated sites. Kent County Council particularly seeks the views of the local community on this matter.

Management of Dungeness High Level Waste (HLW)

5.13.7 Government policy on high level and intermediate level nuclear waste is to provide for their permanent disposal at a *Geological Disposal Facility*. This will be a secure, national repository in suitable geology, but is unlikely to be available before 2042.

54 Dungeness Special Area of Conservation.

Management of Dungeness Intermediate Level Waste (ILW)

5.13.8 The majority of ILW produced during the decommissioning of Dungeness A and B will be during the Final Site Clearance Phase. It will need to be kept in purpose built stores at Dungeness until the national repository is available. Such storage must be within a nuclear licensed site, and it is unlikely that the MWDF will need to identify and assess alternative sites for the disposal of ILW.

Management of Dungeness Low Level Waste (LLW)

5.13.9 Defra produced a policy framework on *Low Level Waste Management* in 2007.[(55)] It proposed that nuclear licensed sites should have a plan for the management of their LLW which complies with the waste hierarchy. In response the NDA published a draft strategy for managing solid LLW in June 2009. Currently all LLW is sent to the *Low Level Waste Repository* (LLWR) near Drigg in Cumbria, but its capacity could be exhausted by 2020. The strategy therefore seeks to extend the life of the repository at Drigg by reduction of waste, ensuring that only waste which needs highly engineered storage is sent there, and finding other waste management routes.

5.13.10 The strategy also notes that disposal of LLW and Very Low Level Waste (VLLW) to an engineered facility on or adjacent to nuclear licensed sites may be an option. This would be consistent with the principle of ensuring that waste is disposed of to the nearest appropriate installation. At Dungeness there are already some LLW facilities.

Question 46

(a) Do you agree that the MWDF need not consider alternatives to the nuclear licensed site at Dungeness for the treatment and interim storage of Intermediate Level Waste from the decommissioning Dungeness A and B?

(b) Should the MWDF Core Strategy include a development management policy establishing the criteria to control such development on the nuclear licensed site?

- **If so, what criteria should be applied given the physical and environmental circumstances of the Dungeness sites?**

55 Defra (2007) Policy for the long term management of solid low level radioactive waste in the UK.

(c) Are treatment and permanent disposal of LLW appropriate at Dungeness?

- **If so, should the MWDF Core Strategy include a development management policy establishing the criteria to control such development on the nuclear licensed site, and what criteria should be applied?**

Non Radioactive Wastes

5.13.11 The majority of waste produced by decommissioning Dungeness A will be not be radioactive, and will be treated and disposed of with other wastes in Kent of the same kind. Most of the c16,600 tonnes of hazardous waste is expected before 2030 in the Care and Maintenance Preparations phase, and includes asbestos wastes. There will also be about 30,700 tonnes of non hazardous waste and 64,600 tonnes of inert waste, the latter mainly in the final site clearance stage. Management of the non hazardous and inert wastes should be subject to the waste hierarchy.

Non Nuclear Industry

5.13.12 The Defra policy framework on *Low Level Waste Management* applies to the non nuclear industry (NNI) which has tended to rely on incineration and landfill. There are a number of NNI producers of LLW and VLLW in Kent, such as hospitals and research establishments. This waste is likely to be a very small quantity relative to the nuclear industry. The sustainability appraisal scoping report for the Defra strategy suggests that NNI waste produced in Kent travels relatively short distances to incinerators, and that there are no landfills which take non nuclear LLW.

5.13.13 The strategy is likely to encourage the use of conventional waste management facilities for NNI wastes, consistent with the government's view that communities should take more responsibility for managing such wastes.

Question 47

Are there existing facilities in Kent that process non nuclear LLW that should be safeguarded through the MWDF?

- **Should the MWDF provide for additional facilities and management routes for such waste?**

5.14 Strategic Waste Sites for the Core Strategy

5.14.1 The Core Strategy must identify any "strategic sites" that are essential to its achievement. These need not be defined sites but may include areas of search and broad locations for waste infrastructure that will be essential to delivering the objectives of the Core Strategy and ensuring that waste treatment and disposal capacity will be in place when required. Of the matters for consultation set out above, there are a small number that might give rise to "strategic sites" in the Core Strategy:

- The provision for large scale capacity for the recovery of energy from C&I waste.
- The co-location of waste uses at a small number of sites of suitable character and size, able to provide flexibly for different technologies over time, and offering the possibility of linkage between their processes.
- The possible need for additional non hazardous landfill capacity.
- The possible need for additional hazardous landfill capacity to accept residues from the treatment of Kent waste.

Question 48

(a) Are there issues that have been raised that require a 'strategic site' in the Core Strategy?

(b) Are there specific locations that should be identified?

6 Restoration and After-use of Minerals and Waste Sites

6.0.1 There are two ways to restore surface mineral workings:

- backfill the quarry void with wastes derived from mineral working or imported onto the site from elsewhere to achieve a landform similar to the original landform; and/or

- restore the void to a lower level without any imported fill. This gives rise to 'wet' restoration when the minerals are worked below the water table.

6.0.2 Where the nature of the geology and groundwater are not constraints, mineral sites provide opportunities for the landfilling of wastes. Backfilling sand and gravel quarries with inert waste has, in the past, been a way to restore sites back to original ground levels and uses (normally agriculture, for example some of the quarries along the River Great Stour at Chartham, near Canterbury). Sand quarries which have a bedrock of clay have been used for landfilling of non-hazardous wastes, such as Shelford landfill to the east of Canterbury and Greatness Landfill near Sevenoaks. Pinden chalk quarry (near Dartford), is used as a Hazardous waste landfill for the disposal of bonded asbestos.

6.0.3 Alternatively, along the river valleys and on the Lydd/Dungeness peninsula, where sand and gravel has been extracted, reinstatement has involved the creation of open areas of water with marginal shallow water habitats.

6.0.4 On the Folkestone beds, soft sand extraction is normally only permitted to occur above the water table. These mineral workings remain dry often incorporating the creation of low-level acid heath habitats on restoration.

6.0.5 Many of Kent's mineral working restoration schemes have required the importation of inert fill to reinstate back to original (or near original) ground levels. Inert fill is now being recycled more and more. It has also been used in sites which are 'exempt from permitting' such as golf course contouring projects and noise bunds required to protect housing developments. Both of these issues have meant that in recent years there has been a shortfall in inert materials available to restore quarries. Quarry restoration is therefore taking longer than it should and in some cases, alternative restoration proposals have had to be prepared and agreed. In order to ensure that available inert fill is directed to quarry restoration projects, it is essential that Kent County Council works closely with the district councils to avoid situations where sham 'recovery' projects such as golf courses are used to disguise landfill and landraise proposals.

6.0.6 Therefore, in order to ensure that future mineral workings are restored quickly to a required standard, any mineral sites that require inert fill to achieve the restoration that is being proposed should be able to provide a clear analysis of where that inert fill will be sourced from and the timescales involved in the restoration of the quarry.

6.0.7 In order to ensure that sites that are allocated in the Core Strategy and the later Mineral Sites and Waste Sites Plans are 'deliverable', it is necessary to consider the proposed restoration and after uses for each site at site allocation stage. Historically these issues have been allowed to be developed at planning application stage and have often had to be changed when the initial schemes are found to have problems in their implementation.

Question 49

(a) In order to ensure that mineral workings and temporary waste management uses are restored to the highest standards, within acceptable timescales, should sites only be allocated where there is certainty over the restoration methods and schemes being achievable within an agreed timescale?

(b) Quarry restoration options must be considered at an early stage in the plan making process and only sites that can deliver innovative sustainable restoration solutions that assist both biodiversity and community aspirations will be acceptable. Do you agree with this stance?

7 Climate Change

7.0.1 The county council has set out, in its Climate Change Guide for Kent's Decision Makers[56] how it plans to respond to the threat of climate change. In terms of planning for minerals and waste in Kent, there are a number of aspects that should be considered in meeting the need to assist in reducing carbon footprint and contributing towards the challenge of climate change:

- New sites and facilities must take significant steps to reduce their carbon footprint and contribute towards the need for a low carbon economy.
- Taking into account the benefit of local supplies of minerals by reducing the impacts of transportation of minerals over long distances by road.
- Reducing the reliance on long distance road transport of commercial and industrial waste from Kent to landfill sites in Essex and further afield.
- Reducing the reliance on landfill for commercial and industrial wastes generated in Kent.
- Encouraging alternative transportation methods of minerals and waste wherever possible - including ship/barge and rail.
- Planning for the supply of minerals that meet the standards for low carbon buildings.
- Encouraging energy efficient schemes to be used for mineral extraction and processing.
- Requiring that the energy supplies for new minerals and waste facilities are to be derived (in part) from renewables.
- Ensuring that all county council developments and those where the county council can influence the developer's choices, utilise recycled and secondary aggregates in favour of primary aggregates wherever possible.
- Ensuring that mineral workings and waste management facilities do not increase the risk of flooding and where practicable, on mineral and large waste sites, provide for increased flood storage capacity.
- Ensure that restoration schemes take into account and provide opportunities for creating habitat for species which are under threat from the effects of climate change.

56 Kent County Council (June 2010) Climate Change A Guide for Kent's Decision Makers.

- Complying with the waste hierarchy which gives first priority to reuse and recycling because they offer the greatest carbon savings.
- Recovering energy from waste streams that cannot be recycled or composted.
- Combining the recovery of energy from waste with the capture of heat to qualify as renewable energy.
- Ensuring that waste is sent to the nearest appropriate installation.

7.0.2 Carbon reduction measures are a key aspect of planning for minerals. Operational emissions at aggregate sites account for an estimated 800,000 tonnes of carbon emissions (more than 0.5% of total UK emissions). It is essential that the carbon footprint of quarries is therefore reduced through the planning system.

7.0.3 The net carbon impact of alternative waste strategies and technologies can be measured using the Environment Agency's WRATE tool.[(57)] The MWDF will seek to minimise carbon emissions from the management of Kent's waste. However, it must also provide a deliverable strategy and work with Kent's existing infrastructure.

7.0.4 Proposals may require the transport of waste for some distance, or recover energy from waste that has some potential for recycling, and this may be acceptable if they offer large carbon savings and are viable as result. Opportunities to provide combined heat and power may call for a fresh view of the appropriate location of waste or other land uses, in order that heat can be used beneficially.

Question 50

Are there any other ways that planning for minerals and waste could contribute to meeting the climate change challenge?

57 http://www.environment-agency.gov.uk/research/commercial/102922.aspx

8 Transport

8.0.1 Whilst construction aggregates can be imported into Kent by sustainable transportation methods including sea and by rail, the onward movement of aggregates to the local markets in Kent usually involves road haulage. Similarly waste movements across the county are primarily by road. However, onward movement of processed marine dredged aggregate from North Kent wharves into Central London and East Anglia is, in some circumstances by barge.

8.0.2 Alternative transportation methods for minerals and waste can be encouraged, however it is unlikely that there will be a major change in transportation methods for minerals and waste over the plan period. In order for the MWDF to act as a driver to direct mineral and waste management to consider sustainable transport modes, there is a need to encourage and develop sustainable transportation alternatives, wherever possible, for the Core Strategy.

8.0.3 In order to minimise the impact of future minerals and waste facilities upon the local community, it will be important that locational issues are given a high priority.

8.0.4 For example, future mineral and waste sites will need to be positioned so that lorries can access the Kent lorry network to and from the site without any significant impact upon local communities.

8.0.5 Also, waste facilities will be located near to the source of the wastes, wherever practicable, thus minimising lorry transportation distances.

Question 51

Are there any other ways that future minerals and waste developments can minimise transportation impacts upon local communities?

9 Implementation, Delivery and Monitoring

9.0.1 The delivery of the MWDF Core Strategy will rely on the private sector to provide the sites and the infrastructure required. The development of new waste treatment facilities by the private sector have often been made possible by a long term local authority contract to handle MSW, and provided additional capacity which is then available for C&I waste.

9.0.2 Delivery will require co-operation between waste collection authorities and the county council, and the Kent Waste Partnership exists for this purpose. It will also be necessary for district councils to reflect the provisions of the MWDF in their Local Development Frameworks.

9.0.3 In order to evaluate how well the county council is doing, in terms of implementing the new policies and working towards achieving the objectives set out at the beginning of this report, it is essential that a suitable framework is established to enable the implementation and monitoring of the delivery strategy.

Question 52

Are there other issues in relation to implementation, delivery and monitoring that we should consider?

10 Controlling Impacts on Local Communities and the Environment

10.0.1 Whilst many of the issues raised above in the main part of the Core Strategy will be covered in both the Core Strategy and Development Management policies, there are some additional Development Management issues that we would like your views upon.

10.0.2 Minerals can only be worked where they are located, and so the location of mineral workings may have to be close to nearby communities. Also waste sites should be situated close to the areas of population that they serve in order to reduce transportation distances. This also gives rise to potential effects upon local communities.

10.0.3 To mitigate against the potential negative effects that mineral working and waste management facilities may have on their nearby communities, conditions and legal agreements can be attached to planning permissions, which would include subjects such as the hours of working, number of lorry movements permitted per day, mitigation required for noise and dust control, restoration requirements, biodiversity improvements and the location and size of the development.

Question 53

Are there any other ways that potential impacts arising from new minerals and waste facilities can be minimised?

11 Controlling Impacts on Kent's Environmental Assets

11.0.1 National and European legislation places duties on Kent County Council to protect and enhance the environment. This requirement needs to be reflected in the MWDF. In the context of future minerals and waste developments, it is vital that people's quality of life and the other environmental assets and their settings are protected wherever possible. Policies are needed that attach the relevant level of protection to these assets.

11.0.2 It is therefore proposed to establish a suite of policies regarding the nationally/internationally designated areas as well as locally important environmental assets.

Question 54

Should there be a hierarchy of protection for these areas, with the highest level of protection being given to international and nationally designated areas?

12 Development Management Issues for Minerals

12.1 Associated Development

12.1.1 Where possible, and where site constraints and environmental considerations allow, associated development should be encouraged as close to the mineral processing facility as possible, in order to reduce transportation distances. Such development may include bagging plants, asphalt and concrete plants or other 'value added' facilities. However, there must be a balance between enabling these developments to occur when they are justified and necessary to enable the mineral site to operate in a sustainable manner and minimising environmental impacts of the development.

Question 55

Should there be a policy that allows associated development in quarries (for the timescale of the quarrying operations), subject to consideration of environmental considerations and ensuring that they are justified and necessary to assist in the overall aims of sustainable development?

12.2 Borrow Pits and Irrigation Reservoirs

12.2.1 Whilst proposals for borrow pits[58] and irrigation reservoirs cannot be anticipated in the preparation of the Core Strategy, these facilities often provide 'windfall' volumes of minerals, particularly construction aggregates. In these circumstances, applications for these facilities will be determined on the basis of a criteria based policy, where the need for the borrow pit or reservoir must be established, where suitable, satisfactory environmental controls can be incorporated into the design.

Question 56

Do you agree with this proposed position regarding borrow pits and irrigation reservoirs?

58 Borrow pits are mineral workings within close proximity to and worked solely in conjunction with a large scale construction project.

12.3 Prospecting for energy minerals and carboniferous limestone

12.3.1 Further applications for prospecting for energy minerals may come forward in the plan period. Therefore it is essential that a policy framework for dealing with these applications is developed, controlling environmental issues including duration and timings of drilling, noise and dust control and ground water protection in particular.

12.3.2 Whilst there has not been any operator interest in submitting an application for prospecting for the East Kent Carboniferous Limestone deposit, it would be in accordance with national minerals policy to develop a criteria based policy against which any applications for prospecting the East Kent Carboniferous limestone deposit are determined against.

Question 57

Do you agree with the need to develop criteria based policies for the determination of prospecting applications for East Kent carboniferous limestone and energy minerals including oil, gas and coal-bed methane?

13 Development Management Issues for Waste

13.1 Landfill

13.1.1 It is recognised that Kent will probably need to make provision for some new landfill void space for the plan period. However it is important that waste is moved up the waste hierarchy wherever possible, and landfill is considered as a 'last resort' for waste streams that cannot be re-used, recycled or used for energy from waste. Development Management policies can ensure that new landfill proposals are only permitted where the applicant can demonstrate that there is no suitable waste management option higher up the waste hierarchy and that the development would lead to a demonstrable improvement in the quality, biodiversity and public enjoyment of the land.

Question 58

Do you agree that Development Management policies should be developed that permit landfills only when the applicant can demonstrate that the waste stream concerned cannot be treated in a more sustainable way, and when the landfill restoration proposals will lead to a demonstrable improvement in land quality, biodiversity and public enjoyment of the land?

13.2 Renewable Energy

13.2.1 Planning applications for new waste management proposals should have to demonstrate that:

- they have maximised the opportunities for renewable energy production both for electricity and heat generation
- new non hazardous landfill facilities have maximised the provision for energy recovery from landfill gas, and
- new waste facilities will have to demonstrate sustainable construction methods, including where appropriate the provision of energy from renewable sources.

Question 59

Do you agree with these requirements for energy and heat recovery from new waste facilities?

14 Cumulative Impact

14.0.1 In some parts of the county, local communities raise concerns regarding the cumulative effect of several different mineral workings and waste developments within a small area. However, close location of facilities often has benefits in allowing related facilities to co-locate in close proximity to each other, thus reducing transportation distances between them. In other circumstances, the close proximity of two or more minerals or waste sites may cause disturbance to local communities because of the increased level of lorry movements.

Question 60

Where communities are affected by the cumulative impact of minerals and waste facilities, should the Core Strategy include policies which would reduce the future impact of new minerals and waste developments upon these areas, by methods such as phasing the release of future mineral reserves?

15 Airfield Safeguarded Areas

15.0.1 Airfields are safeguarded in accordance with Town and Country Planning (Safeguarding Aerodromes, Technical Sites and Military Explosive Storage Areas Direction 2002) as Airfield Safeguarding Areas (ASAs). The purpose of ASAs is to ensure that any development proposals in proximity to them are considered. For example the impact of built structures (stacks), lighting or the risk of bird strike need to be taken into account. Kent County Council needs to consult with the operators of the airfields when waste or mineral site proposals fall within the ASA.

15.0.2 Proposals for minerals and waste management development within ASAs will therefore only be granted where it can be demonstrated that there is no unacceptable risk to aircraft safety.

Question 61

Are there any other matters in relation to Airfield Safeguarding Areas that should be taken into account?

16 Have We Forgotten Anything?

Question 62

Is there anything else that you would like to comment upon in relation to the strategic planning of minerals and waste in Kent. Have we missed anything?

Appendix 1: Glossary

A	
After use	The use to which a quarry or landfill site is put following its restoration, such as forestry, agriculture, recreation or industrial site.
Aggregate	Inert particulate matter which is suitable for use (on its own or with the addition of cement or bituminous material) in construction as concrete, mortar, finishes, road stone, asphalt, or drainage course, or for use as constructional fill or railway ballast.
Aggregates / Soils Recycling	Rubble, hardcore and soil from construction and demolition projects can often be re-used on-site. Alternatively it can be taken to purpose built facilities for crushing, screening and re-sale. There are also temporary facilities at some quarries landfill sites where material can be recovered for re-sale or use on site.
Agricultural Waste	The regulations for this waste stream have recently altered meaning farmers can no longer managed all of their own waste on the farm. The new agricultural waste regulations affect whether or not waste can be burnt, buried, stored, used on the farm or sent elsewhere. Mostly covers animal slurry/by products and organic waste, but also scrap metals, plastics, batteries, oils, tyres etc.
Amenity	A land use which is not productive agriculture, forestry or industrial development; can include formal and informal recreation and nature conservation.
Anaerobic Digestion	Anaerobic digestion is a natural process. It is the breakdown of organic material in the absence of air. It is a mature technology in other European countries where it is used as a waste management method. It is carried out in an enclosed vessel and produces methane which powers an engine used to produce electricity. The useful outcomes of anaerobic digestion are electricity, heat and the solid material left over called the digestate. Both the heat and the electricity can be sold if there is a market and the digestate can either be sold or used for agricultural purposes (landspread). Its use is currently small-scale and it can only be used for part of the waste stream e.g. sewage sludge, agricultural waste and some organic municipal and industrial waste.

Annual Monitoring Report	Records progress in implementing the Local Development Scheme and the performance of policies against targets in Development Plan Documents. Indicates what action an authority needs to take if it is not on track or policies needs to be revised/ replaced.
Apportionment	Kent's share of the regional waste management capacity to be provided and Kent's share of the regional aggregate provision. This is apportioned in the East Midlands Regional Spatial Strategy.
B	
Biodegradable waste	Any waste that is capable of undergoing natural decomposition, such as food and garden waste, paper and cardboard.
Biodiversity	The variety of all life on earth (mammals, birds, fish, invertebrates, plants etc).
Brownfield Site	Site previously used for or affected by development. It may be abandoned or in a derelict condition.
Buffer Zone	A zone or area that separates minerals and/ or waste management facilities from other land uses to safeguard local amenity.
C	
Commercial Waste	Waste from premises used mainly for trade, business, sport, recreation or entertainment, as defined under section 5.75 (7) of the 1990 "Environmental Protection Act". As well as paper, card, plastic and glass, for example, it is likely to include timber, metal, paints, textiles, chemicals, oils and food waste.
Composting	This is the breakdown of plant matter by the action of micro-organisms and other organisms into usable end-products. It is an important method of processing organic waste because it reduces the amount of potentially polluting waste going to landfill or incineration.
Construction Waste (Also see Demolition Waste)	Waste arising from any development such as vegetation and soils from land clearance, remainder materials and off-cuts. From building sites, road schemes and landscaping projects. It is mostly made up of stone, concrete, rubble and soils but may include some timber, metal and glass.

D	
Degradable (or Putrescible) Waste (Also called Non-Hazardous Waste)	Waste which will quickly or slowly biodegrade or decompose, releasing environmental pollutants. Types of material include wood and wood products; paper; plasterboard; ash; concrete; plastic; leather; rubber; textiles; cardboard; vegetable matter; food processing wastes; sewage sludge; metals and chemical combinations thereof; coke; coal; mica; diatomaceous earth; slag; boiler scale; soap, cellulose, floor sweepings; sacks; electrical fittings and appliances; machinery; cosmetic products; tarred materials; carbon; ebonite; pottery; china; enamels; abrasives; trees; bushes; grass; flowers and other vegetation.
Demolition Waste (Also see Construction Waste)	Masonry and rubble wastes arising from the demolition or reconstruction of buildings or other civil engineering structures.
Development Framework	A portfolio of documents. Collective term for the Development Plan Documents, the Local Development Scheme, the Statement of Community Involvement, Annual Monitoring Report, and any supplementary planning documents.
Development Plan Document (DPD)	These are the spatial planning documents (plans) required by the Local Development Framework. These set out spatial planning policies and proposals for an area or topic. They replace the former Local Plan and include the core strategy, detailed development control policies, site specific allocations of land, area action plans (where needed) and a proposals map.
E	
Energy from Waste	The generation of heat and power from burning waste, the production of fuels from other forms of treatment, and the combustion of landfill gas and gas from anaerobic digestion to create electricity.
Environmental Impact Assessment	The process by which the impact on the environment of a proposed development can be assessed. Certain types and scale of waste proposals will require an Environmental Impact Assessment to be carried out. The Town and Country Planning (Environmental Impact Assessment) (England Wales) Regulations 1999 and the accompanying Department of the Environment Transport and the Regions Circular 02/99 sets out the circumstances when planning applications will be required to be accompanied by an Environmental Impact

	Assessment (EIA). The information contained in the EIA will be taken into account when the Councils determine such proposals.
Examination in Public	All Development Plan Documents will be subject to an independent examination before a planning inspector. The inspector's report is binding on the local authority.
Exempt Sites	Recovery operations, disposal and some waste storage activities are required to be registered with the Environment Agency but do not necessarily require a licence or permit. Such sites are called exempt but they may still require planning permission before they can operate. Exempt facilities are subject to general rules (e.g. on the types and quantities of wastes received).
G	
Geodiversity	Geodiversity is the variety of rocks, minerals, fossils, soils and landforms, together with the natural processes which shape the landscape.
Greenhouse Gas	Gases such as carbon dioxide and methane which when their atmospheric concentrations exceed certain levels can contribute to climate change by forming a barrier in the earth's atmosphere that traps the sun's heat.
Groundwater	Is contained within underground strata (aquifers) of various types across the country. Groundwater is usually of high quality and often requires little treatment prior to use. It is however vulnerable to contamination from pollutants. Aquifer remediation is difficult, prolonged and expensive and therefore the prevention of pollution is important.
H	
Hazardous Waste	Controlled Waste that is dangerous or difficult to treat, keep, store or dispose of, so that special provision is required for dealing with it. Hazardous wastes are the most dangerous wastes and include toxic wastes; acids; alkaline solutions; asbestos; fluorescent tubes; batteries; oil, fly ash; industrial solvents; oily sludges; pesticides; pharmaceutical compounds; photographic chemicals; waste oils; wood preservatives. If improperly handled, treated or disposed of, a waste that, by virtue of its composition, carries the risk of death, injury or impairment of health, to humans or animals, the pollution of waters, or could have an unacceptable environmental impact

	(q.v.). It should be used only to describe wastes that contain sufficient of these materials to render the waste as a whole hazardous within the definition given above.
Household Waste	Waste from a domestic property, caravan, residential home or from premises forming part of a university or school or other educational establishment; premises forming part of a hospital or nursing home. (1990 EPA –5.75 (5)).
Household Waste Recycling Centre (HWRC) – Also Civic Amenity Sites	They are often mistakenly called the "council tip" or "council dump", even though they are now synonymous with recycling. They are sites operated by the County Council to which the public may deliver non-business waste and at which a range of materials (e.g. metals, paper, glass, engine oil) is recovered for recycling.
I	
Industrial Waste	Waste from any of the following premises: factory; provision of transport services (land, water and air); purpose of connection of the supply of gas, water, electricity, provision of sewerage services, provision of postal or telecommunication services (1990 EPA).
Inert Waste	Waste which will not biodegrade or decompose (or will only do so at a very slow rate). Types of materials include uncontaminated topsoil; subsoil; clay; sand; brickwork; stone; silica; and glass.
L	
Landbank	A stock of mineral reserves with planning permission for their winning and working.
Landfill	The deposition of waste onto hollow or void space in the land, usually below the level of the surrounding land or original ground level in such a way that pollution or harm to the environment is prevented. Former mineral workings have historically been used for this purpose.
Landfill Gas	A by-product from the digestion by anaerobic bacteria (rotting) of putrescible matter present in waste deposited on landfilled sites. The gas is predominantly methane (65 per cent) together with carbon dioxide (35 per cent) and trace concentrations of a range of other vapours and gases.

Local Development Scheme	The timetable for the preparation of the Local Development Framework plans, which is agreed with the Government Office for the South East (GOSE).
M	
Materials Recovery Facility (MRF)	A building for where waste can be taken in bulk for separation, recycling or recovery of waste materials. This is usually municipal waste, but some sites take commercial and industrial waste. Some may also take construction and demolition waste to be crushed and screened.
Methane	A colourless, odourless, flammable gas, formed during the decomposition of biodegradable waste.
Mineral Consultation Area (MCA)	An area identified in order to ensure consultation between the relevant LPA and the Mineral Planning Authority before certain non-mineral planning applications made within the area are determined.
Mineral Safeguarded Area (MSA)	MSAs are known areas of mineral resources that are of sufficient economic value to warrant protection for generations to come. There is no presumption that any areas within a MSA will ultimately be environmentally acceptable for mineral extraction. The purpose of MSAs is not to automatically preclude other forms of development, but to make sure that mineral reserves are considered in land-use planning decisions.
Municipal Solid Waste (MSW)	Municipal solid waste is that waste which is collected and disposed of by or on behalf of a local authority. It will generally consist of household waste, some commercial waste and waste taken to civic amenity waste collection/disposal sites by the general public. In addition, it may include road and pavement sweepings, gully emptying wastes, and some construction and demolition waste arising from local authority activities. It is typically made up of card, paper, plastic, glass, kitchen and garden waste.
P	
Permitted Reserves	Saleable minerals in the ground with planning permission for winning and working. Usually expressed in million tonnes.
Planning Conditions	Conditions attached to a planning permission for the purpose of regulating and controlling the development.
Primary Aggregates	Naturally occurring sand, gravel and crushed rock used for construction purposes.

Putrescible Waste	Waste readily able to be decomposed by bacterial action. Landfill gas and leachate can occur as by-products of decomposition.
Pyrolisis / Gasification	Both systems involve heating the waste in varying amounts of oxygen to produce a gas. Neither system is yet as energy efficient as incineration; there is more residual waste left over which has to be burned or landfilled. The technology is not yet well established for waste management and is more widely used in industry.
R	
Ramsar Sites	Sites of international importance to birds which inhabit wetlands. Ramsar is the name of the place where the Wetlands Convention was signed.
Reclamation of Mineral Workings	The combined processes of Restoration and Aftercare following completion of mineral working.
Recovery	The collection, reclamation and separation of materials from the waste stream.
Recovery Facilities	A facility that recovers value, such as resources and energy, from waste prior to disposal, includes recycling, thermal treatment, biological treatment and composting facilities.
Recycled Aggregates	Aggregates produced from recycled construction waste such as crushed concrete, planings from road surfacing etc.
Recycling	The collection and separation of materials from waste and subsequent processing to produce new marketable products.
Reduction	Use of technology requiring less waste generation from production , or Production of longer lasting products with lower pollution potential, or Removing material from the waste stream, e.g. Paper being taken straight from a waste producer to a paper re-processing facility, avoiding it being handled at any waste management operation.
Reuse	Reuse of waste is encouraged by the Government's National Waste Policy requirements. Can occur within a company, or by moving waste for reuse elsewhere.

Regional Self-Sufficiency	A key aim of sustainable waste management is regional self-sufficiency in waste disposal, ie the waste generated within the region can be disposed or managed within the same region.
Regionally Important Geological Sites (RIGS)	These are any geological or geomophological sites, excluding SSSIs, that are considered worthy of protection for their educational, research, historical or aesthetic importance. RIGS are broadly analogous to non-statutory wildlife sites and are often referred to locally by the same name. They can include important teaching sites, wildlife trust reserves, Local Nature Reserves and a wide range of other sites. RIGS are not regarded as inferior to SSSIs but as sites of regional importance in their own right. The strategy for selecting and conserving Regionally Important Geological/Geomorphological sites involves the setting up of a local RIGS group.
Residual Waste	The elements of the waste streams that remain following recovery, recycling or composting operations.
Resource Recovery	The extraction of useful materials or energy from solid waste.
Restoration	Operations designed to return an area to an acceptable environmental state, whether for the resumption of the former land use or for a new use following mineral working or waste disposal (landfill for example). Involves the reinstatement of land by contouring, the spreading of soils or soil making materials etc.
S	
Safeguarding	Protecting sites that have potential for relevant development (waste and minerals) from other development.
Saved Policy	Retaining a Local Plan (or policies from it) until replacement by a DPD (Development Plan Document). Normally lasts for three years only, but “extended saving” can occur if policies need to stay in place for a longer period.
Scheduled Ancient Monument	Nationally important monuments and archaeological areas that are protected under the Ancient Monuments and Archaeological Areas Act .
Secondary Aggregates	Construction Materials that are produced as by-products of other processes and used instead of primary aggregates. Secondary aggregates include boiler ashes, colliery shale, burned clay, pulverised fuel ash, broken airfield concrete and clay, chalk and shale.

Sites of Special Scientific Interest (SSSIs)	These sites are notified under Section 28 of the Wildlife and Countryside Act 1981 by English Nature whose responsibility is to protect these areas. These are important areas for nature conservation i.e. valuable flora, fauna or geological strata. English Nature needs to be notified of planning proposals in or adjacent to the designated areas. National Nature Reserves (NNRs), terrestrial RAMSAR sites, Special Protection Areas (SPAs) and Special Areas of Conservation (SACs) are also SSSIs under national legislation.
Site (Specific) Allocations	Sites which are generally well defined and where there is an implied presumption in favour of their being developed during the plan period
Statement of Community Involvement	A document that sets out how the Authority is to ensure suitable sufficient consultation occurs for different elements of the planning process. This is a requirement brought in by the Planning and Compulsory Purchase Act 2004.
Sterilisation	When a change of use or the development of land on or near a minerals or waste facility prevents possible mineral extraction or continued use of a wharf, railhead or other facility in the foreseeable future.
Strategic Environmental Assessment	An evaluation process for assessing the environmental impacts of plans and programmes. This is a statutory requirement of the M&WDF system.
Submission	A stage of the Development Plan Document preparation process where the document is 'submitted' to the Secretary of State for independent examination by a planning inspector. The document is published for public consultation prior to submission.
Sustainability Appraisal	An evaluation process for assessing the environmental, social, economic and other sustainability effects of plans and programmes. This is a statutory requirement.
Sustainable Development	A widely quoted definition is “development that meets the needs of the present without compromising the ability of future generations to meet their own needs”. The definition also encompasses the efficient use of natural resources.
T	
Transfer Stations	Facilities which receive waste (normally from a local area), where the waste is bulked up and transported further afield in larger lorries (or in some cities by barges) for disposal or

	recovery. Some transfer stations sort out the recoverable wastes, such as construction waste and scrap metal prior to onward transportation for disposal or processing.
V	
Void (space)	The hole (volume) created by mineral working which may have potential for landfilling with waste.
W	
Waste Arisings	The amount of waste generated in a given locality over a given period of time.
Waste Collection Authority (WCA)	A local authority with a statutory responsibility to provide a waste collection service to each household in its area, and on request, to local businesses.
Waste Disposal Authority (WDA)	A local authority that is legally responsible for the safe disposal of household waste collected by the WCAs and the provision of Household Waste and Recycling Sites.Long-term contracts are let to private sector companies who provide the facilities to handle this waste. These contracts are awarded on the basis of detailed cost and environmental criteria as well specific targets for recycling and reducing landfill.
Waste Hierarchy	Suggests that the most effective environmental solution may often be to reduce the amount of waste generated – reduction; where further reduction is not practicable, products and materials can sometimes be used again, either for the same or a different purpose – re-use; failing that, value should be recovered from waste, through recycling, composting or energy recovery from waste; only if none of the above offer an appropriate solution should waste be disposed.
Waste Minimisation	The reduction of unwanted outputs from the manufacturing process and the manufacture of products that are likely to result in less waste when they are used.
Waste Management Licence	Licence granted by the Environment Agency authorising treatment, keeping or disposal of any specified description of controlled waste in or on specified land by means of specified plant.
Waste Reduction	To make waste production and waste management practices more sustainable, key objectives are to reduce the amount of waste that is produced, make the best use of waste produced and choose practices which minimise the risks of pollution and

	harm to human health. Waste reduction is concerned with reducing the quantity of solid waste that is produced and reducing the degree of hazard represented by such waste.

Appendix 2: List of Existing Mineral Sites in Kent Subject to Periodic Review

2.0.1 The list represents the current situation regarding the review dates for the periodic review of mineral sites (ROMP dates) in Kent. This is a statutory requirement to review and update the planning permission conditions – in particular those in relation to restoration requirements.

2.0.2 It is possible that some of the dates may be put back as a result of S73 permissions that may have been granted in relation to these sites.

2.0.3 The dates should all be 15 years from the most recent permission relating to each site unless a postponement date that is later than this has been agreed.

2.0.4 The list of dormant sites is also liable to change.

2.0.5 If further clarification is required on the review dates for any of these sites, or to ascertain whether there has been any change to the review dates for particular sites, we recommend contacting the Planning Applications Group:

Planning Applications Group
1st floor, Invicta House
County Hall
Maidstone
Kent ME14 1XX

01622 221070
planning.applications@kent.gov.uk

2.0.6 The four sites in the yellow box are ROMP applications currently being processed or those which are on 'hold.'

Newington Sandpit, Folkestone	01.06.98
West Hythe Ballast Pit, Hythe	30.04.01
Sevenoaks Quarry (Tarmac)	31.12.07
Holborough, Snodland	31.03.11
Ightham Sandpit, Borough Green	20.05.12
Winterbourne Wood East, Hickman's Green	24.10.12
Winterbourne Wood West, Hickman's Green	24.10.12
Blaise Farm, Offham	11.08.13
Beacon Hill, Charing	25.02.13

Deanery Farm, Chartham	04.06.13
Nepicar Farm, Platt	13.10.14
Darenth Court Quarry, Brooklands	26.10.14
Darenth Road Chalk Pit, Brooklands	26.10.14
Hegdale Quarry, Challock	28.03.15
Denge & New Romney Pits, Lydd-on-Sea	21.12.15
Squerrys Sandpit, Westerham	24.04.15
Swan Street, Charing	03.07.16
Faversham Quarry, Oare	11.07.16
Bramling Limeworks, Bekesbourne	13.11.16
Crundale Limeworks, Wye	13.11.16
Stonecastle Farm, Whetsted	23.09.17
Trenley Park Wood, Fordwich	29.11.17
Aylesford Sandpit, Aylesford	17.01.17
Hammill Brickworks, Woodnesborough	15.07.18
Park Farm, Wrotham	03.03.18
East Peckham Quarry, Hale Street,	23.02.20
Hermitage Quarry, Ditton	08.12.20
Highsted Quarry, Chislet	31.03.21
Rowling Chalk Pit, Woodnesborough	12.07.22
Babylon Tile Works, Hawkenbury	25.01.22
Allens Bank, Lydd	23.11.22
Conningbrook Quarry, Willesborough	17.09.23
Pinden Quarry, Longfield	27.03.23
Scotney Court Quarry, Lydd	31.03.23
Pluckley Brickworks, Chambers Green	29.04.24
Shepherds Farm, Lenham	18.02.25

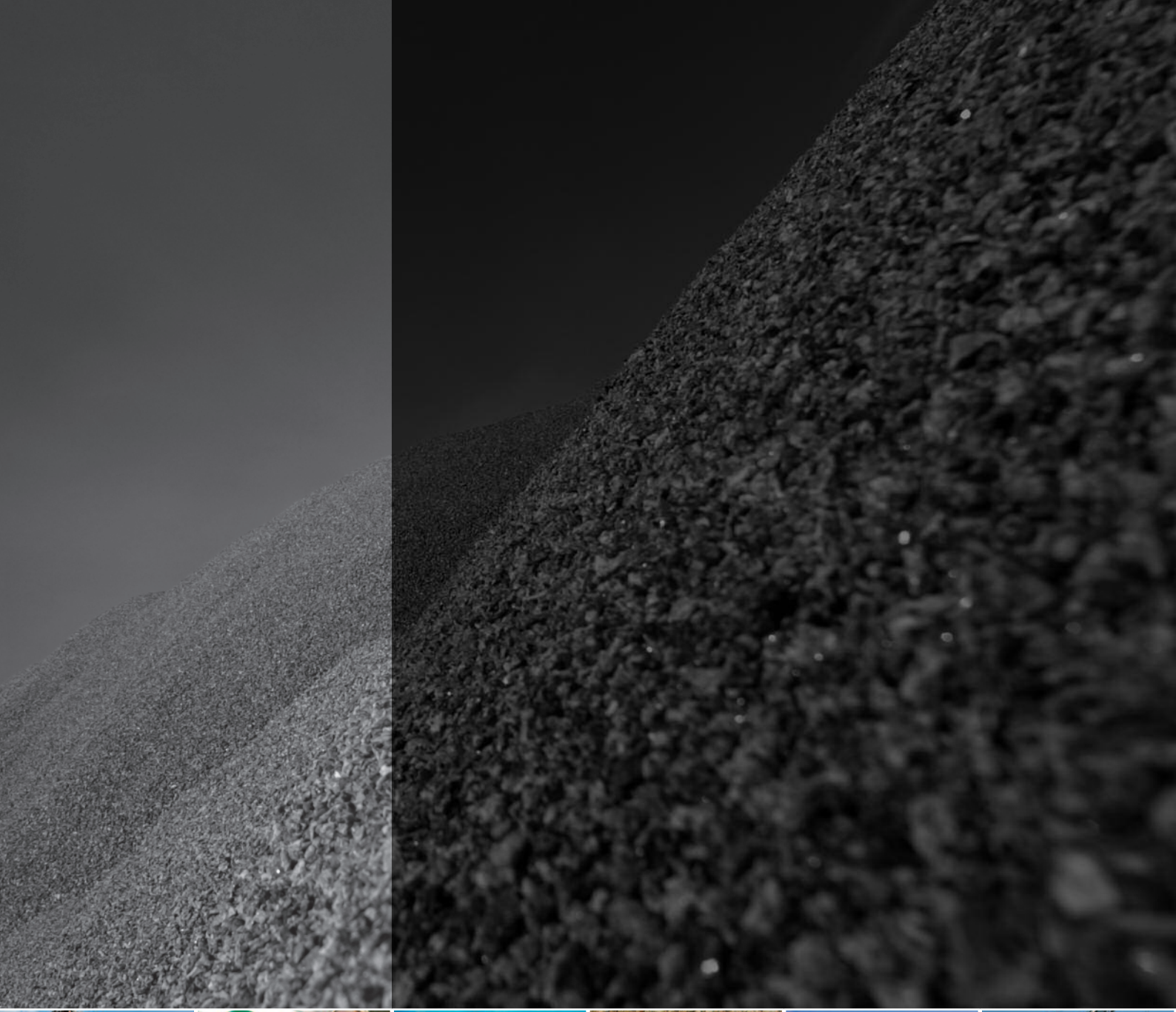
Dormant Sites	
Staplehurst Brickworks, Staplehurst	
Brabourne Limeworks	
Maltmans Hill, Smarden	
Naccolt Brickworks, Wye	
Handen Quarry, Aldington	
Furfield Quarry Bo Monchelsea	
Torry Hill, Wichling	
Folkestone Foreshore, Folkestone	
Libbetwell North, Newington	
Paddlesworth Clay Pit, Snodland	
Addington Sandpit, Addington	
Frittenden Brickworks, Dig Dog Lane, Frittenden	
Chiddingstone Brickworks, Leigh	
London Road, Riverhead	
Stubble Hill, Harrietsham	
Otterham Brickworks, Otterham Quay	

Appendix 3: Kent MWDF Sustainability Appraisal Framework Objectives

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.
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.	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.
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.
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.
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.

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, 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.
	Ensure that minerals and waste development does not contribute to poor air quality.
Plan for the correct waste management facilities, in the right place at the right time.	Put in place the facilities and infrastructure that will support integrated waste management and move waste management up the waste hierarchy.
	Minimise potential negative effects associated with waste management facilities.
	Support self sufficiency where possible.
Make efficient use of land and avoid sensitive.	Make best use of previously developed land locations.
	Avoid locations with sensitive geomorphology.
Help to tackle more hidden forms of deprivation and exclusion, such as that which is experienced by residents of rural areas and particular socio-economic groups within communities.	Help to redress spatial inequalities highlighted by the Index of Multiple deprivation and other indicators.
	Support efforts to create and sustain sustainable communities, particularly the improvement of health and wellbeing.
	Take account of locally specific issues associated with rurality.
Support the delivery of housing targets.	Ensure that minerals and waste development does not act as a constraint to housing.
	Ensure that the necessary aggregates are available for building, and that the necessary waste infrastructure is in place.
Support economic growth and diversification with higher value, lower impact activities.	Support the development of a dynamic, diverse and knowledge-based economy that excels in innovation.

	Stimulate economic revival and targeted employment generation in deprived areas.



Produced by:

Integrated Strategy & Planning,
Environment, Highways and Waste
Kent County Council
Invicta House
County Hall
Maidstone
Kent ME14 1XX

Tel: 01622 696815
Email: mwdf@kent.gov.uk
Web: www.kent.gov.uk/mwdf
Textphone: 08458 247 905

County Print & Design 01622 605368 18474/TRH