

# Waste Development Document

## Preferred Approach

November 2011



Working in partnership



## Foreword



By John Jowers, Cabinet Member for Planning and Communities, Essex County Council, and Jonathon Garston, Executive Councillor of Planning, Southend-on-Sea Borough Council



The Preferred Approach represents the next important stage in the preparation of Essex County Council and Southend-on-Sea Borough Council's Waste Development Document (WDD). This new document sets out our thinking on how to meet future waste management requirements in the area over the plan period from 1 April 2010 to 31 March 2031(inclusive) and to continue to move waste management up the waste hierarchy and away from landfill.

In arriving at these stated preferences, the Waste Planning Authorities have drawn upon a substantial body of factual evidence, considerable professional expertise, and the consultation responses and workshop feedback received since preparation of the document began in 2010.

We are pleased to report from this evidence base that there has been a substantial shift away from the need for additional landfill even since the Waste DD Issues and Options consultation. This is thanks to a mixture of reduced amounts of waste arisings, re-assessment of our existing capacity within the Plan Area and the diversion of waste away from landfills to the network of existing and permitted waste management facilities. On this basis, it is not intended to take any site allocations for landfill forward within the WDD at this stage. Instead, existing waste management facilities deemed to be strategic have been safeguarded and a small number of additional waste management facilities have been allocated. This document clearly explains the way these preferred approach choices have been made.

We are extremely grateful for all your contributions so far. The Government is placing ever greater emphasis on local communities becoming engaged in policy making and significant efforts have been made to ensure all those likely to be affected by the plan have the opportunity to be involved.

The Preferred Approach stage is a particularly crucial time to continue this involvement as it provides the main opportunity to influence the future direction of waste policy and the selection of future sites.

It is very important that the Waste Development Document is put in place to ensure that future waste provision within Essex and Southend-on-Sea is appropriate, situated in the right locations, and has a minimal impact on the environment. There is also added pressure from the implications of Article 7 of the EU Waste Framework Directive, which places a responsibility on all planning authorities to have their waste plans submitted for examination as soon as possible. We believe the vision, strategies, policies and sites outlined in this Preferred Approach set us well on the way towards meeting this objective.

We would encourage you to give us your thoughts on the preferred approaches set out in the Waste Development Document and on how you would like to see them progressed before we produce our submission document. Key evidence sources used to inform the document can

be viewed on our website: *Capacity Gap Compilation Report, Sustainability Appraisal, Habitat Regulation Assessment and Flood Risk Assessment*. During the 8-week consultation period from 24 November 2011 - 5.30pm 19 January 2012, there will also be drop-in sessions across Essex and Southend-on-Sea where you can discuss the approach we are taking. See the website [www.essex.gov.uk/WDD](http://www.essex.gov.uk/WDD) for details of these.

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and

A handwritten signature in black ink that reads "A. G. G. G.". The signature is written in a cursive style with a large, stylized initial 'A'.

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## GLOSSARY

**Agricultural waste:** Waste that is specifically generated by agricultural activities. This includes: empty pesticide containers; old silage wrap; used tyres; and even surplus milk.

**Amenity:** A positive element or elements that contribute to the overall character or enjoyment of an area.

**Anaerobic digestion (AD):** Biological treatment of biodegradable organic waste in the absence of oxygen. Results in the generation of biogas (rich in methane and can be used to generate heat and/or electricity), fibre (can potentially be used as a soil conditioner) and liquor (can potentially be used as a liquid fertiliser).

**Biodegradable waste:** Waste that is capable of breaking down naturally, such as food and garden waste.

**Biodegradable municipal waste (BMW):** Biodegradable waste found in municipal solid waste (MSW) (Defra calculates that on average MSW in England contains 68% BMW).

**Brownfield land/sites:** Abandoned or underused industrial and commercial facilities available for re-use.

**Climate change:** Changes in climate resulting from human activities. More specifically, human activities which have resulted in an increase in greenhouse gases in the atmosphere (e.g. emissions from transport and industry), global changes to land surface, such as from deforestation, and an increase in atmospheric concentrations of aerosols, all of which have resulted in spatially distinct climatic changes (e.g. higher average temperatures, lower rainfall rates).

**Clinical waste:** Mainly arises from medical, dental, veterinary, pharmaceutical or similar practice, but also arises from residential or nursing homes and private households. Unless the waste is rendered safe it may prove hazardous to any person coming into contact with it.

**Combined Heat and Power (CHP):** The use of a heat engine or power station to simultaneously generate both electricity and useful heat. Conventional power plants emit the heat created as a by-product of electricity generation into the natural environment. In contrast, CHP captures the heat for use in domestic or industrial heating.

**Commercial and industrial waste (C&I):** Waste arising from wholesalers, catering establishments, shops and offices (in both the public and private sector), factories and industrial plants. It can include a number of materials such as food, paper, card, wood, glass, plastics and metals.

**Composting:** Break down of biodegradable waste using oxygen, leaving a residue (compost), water and carbon dioxide.

**Construction, demolition and excavation waste (CD&E):** Arises from the construction, repair, maintenance and demolition of buildings and structures and the excavation of sites. It mostly includes brick, concrete, hardcore, subsoil and topsoil, but can include timber, metal, plastics and occasionally special hazardous waste materials.

**Controlled wastes:** household, industrial and commercial wastes, the deposition, recovery and disposal of which are subject to the licensing system established through the Environmental Protection Act (1990). There are exemptions from the requirement for a licence (e.g. individuals depositing personal garden waste), and these are detailed in the Controlled Waste Regulations (1992).

**Core Strategy:** A Development Plan Document setting out the spatial vision and strategic objectives of the planning framework for an area, having regard to the Community Strategy.

**Development control:** The process whereby a local planning authority receives and considers the merits of a planning application and whether it should be given permission having regard to the development plan and all other material considerations.

**Development Plan Document (DPD):** Development Plan Documents are prepared by local planning authorities and outline the key development goals of the local development framework. They include the core strategy, site-specific allocations of land and, where needed, area action plans. There will also be an adopted proposals map which illustrates the spatial extent of policies that must be prepared and maintained to accompany all DPDs.

**Employment land:** Land allocated by local planning authorities for industrial and business use.

**Energy from Waste Facility:** A facility which burns waste material at high temperatures, directly releasing the energy in the waste. The heat energy from the combustion can be recycled and use to heat buildings such as factories. Alternatively, electricity or a combustible fuel, such as methane or ethanol, can be produced from the combustion process.

**Examination in Public:** The method of considering public views on a draft regional spatial strategy or local development plan document, or proposed changes to it.

**Gasification and pyrolysis facility:** Treatment of organic waste at high temperatures in conditions of limited or no oxygen to produce a mixture of gaseous and liquid fuels and a solid inert residue (mainly carbon).

**Greenhouse gas:** Gases which contribute to climate change. Naturally occurring examples include water vapour, carbon dioxide, methane, nitrous oxide and ozone. Some human activities increase these gases, including fossil fuel combustion within motor vehicles and some power stations.

**Hazardous waste:** Waste which poses substantial or potential threats to public health or the environment (when improperly treated, stored, transported or disposed). This can be due to quantity, concentration, or characteristics of the waste. Hazardous waste possesses one or more hazardous properties, as detailed in the Hazardous Waste Directive, for example explosive, oxidising, highly flammable, irritant etc.

**Household waste:** Waste from household collection rounds, street sweepings, public litter bins, bulky items collected from households and wastes which householders themselves take to household waste recovery centres and "bring sites".

**Inert waste:** Inert waste is that which is neither chemically or biologically reactive and will not decompose (e.g. sand and concrete).

**Inspectors Report:** A report issued by a planning inspector regarding the planning issues debated at the independent examination of a development plan or a planning inquiry.

**Integrated Waste Management Facility (IWMMF):** A facility that incorporates a number of individual elements that work together to effectively process waste. For example, an IWMMF could include recycling, paper pulping and energy from waste capabilities.

**In-Vessel composting:** Composting that is undertaken in enclosed reactors (e.g. metal tanks or concrete bunkers) to allow for a greater degree of control of the process, such as through regulating air flow and temperature.

**Issues and Options and Preferred Options:** The "pre-submission" consultation stages on Development Plan Documents with the objective of gaining public consensus over proposals ahead of submission to government for independent examination.

**Landfill site:** Sites where local authorities and industry can take waste to be buried and compacted with other wastes. The Environment Agency licenses and regulates landfill sites to ensure that their impact on the environment is minimised.

**Land-raise:** Also generically referred to as landfill, refers to waste disposal that occurs above pre-existing ground levels.

**Local Development Framework (LDF):** The local development framework, along with the regional spatial strategy, provides the essential framework for planning in the local authority's area.

**Low level radioactive waste:** A by-product of certain industrial and commercial processes, such as contaminated equipment and protective clothing from the nuclear industry, research and medicine; soil and rubble from the decontamination and decommissioning of nuclear sites; and residues from industrial processing of some minerals.

**Materials recycling facility (MRF):** A facility for sorting, separating and packing or baling recyclable materials into individual materials prior to reprocessors who wash and prepare the materials for manufacturing into new recycled products. MRFs can also be referred to as materials recovery or reclamation facilities.

**Mechanical Biological Treatment Facility (MBT):** A facility containing a hybrid treatment process that uses both mechanical and biological techniques to sort and separate mixed waste.

**Municipal Solid waste (MSW):** Includes household waste and any other waste collected by waste collection authorities (or their agents) such as municipal parks and garden waste, commercial or industrial waste and waste resulting from the clearance of fly tipped material. It can include a number of materials such as food, paper, card, wood, glass, plastics and metals.

**Municipal Waste Management Strategy:** These strategies set out a strategic framework for the management of municipal waste, jointly developed and subscribed to by the waste collection authorities and waste disposal authority in an area.

**National Planning Policy Framework (NPPF):** A new National Planning Policy Framework is being produced by the Coalition Government, with the aim of streamlining and simplifying national level planning policy. This will eventually replace Planning Policy Statements and Planning Policy Guidance. A draft for consultation was published in July 2011.

**Non-hazardous landfill:** A landfill which can accept non-inert (biodegradable) wastes e.g. municipal and commercial and Industrial waste and other non-hazardous wastes (including inert), that meet the relevant waste acceptance criteria.

**Non-inert waste:** Waste that is potentially biodegradable or may undergo significant physical, chemical or biological change once landfilled.

**Planning condition:** Condition attached to a planning permission setting out requirements under which the development can take place, for example, the use of specific methods of construction, or hours of operation at a development.

**Previously developed land:** Previously developed land is that which is or was occupied by a permanent structure (excluding agricultural or forestry buildings), and associated fixed-surface infrastructure.

**Regional Spatial Strategy (RSS):** A strategy for how a region should look in 15 to 20 years time and possibly longer. The Regional Spatial Strategy identifies the scale and distribution of new housing in the region, indicates areas for regeneration, expansion or sub-regional planning and specifies priorities for the environment, transport, infrastructure, economic development, agriculture, minerals and waste treatment and disposal. Most former Regional Planning Guidance is now considered RSS and forms part of the development plan. Regional Spatial Strategies are prepared by Regional Planning Bodies. Under the Localism Bill, the Coalition Government is proposing to abolish the RSSs; however until this process is legally complete, they remain a material consideration.

**Strategic Environmental Assessment:** An environmental assessment of certain plans and programmes, including those in the field of planning and land use, which complies with the EU Directive 2001/42/EC.

**Sustainable Community Strategy:** Community Strategies are 10-year vision statements for a given area, produced by the Local Strategy Partnership and required by national government. Local Area Agreement targets have to reflect the vision, priorities and challenges set out in Sustainable Community Strategies.

**Sustainability Appraisal:** An appraisal of the economic, environmental and social effects of a plan from the outset of the preparation process to allow decisions to be made that accord with sustainable development.

**Sustainable transport:** Transport that has a reduced impact on the natural environment, as compared with road-based transport. In the context of waste transport, this includes rail and water-based transport. More generally, sustainable transport includes walking, cycling and vehicle sharing.

**Townscape:** The general appearance of a built-up area, for example a street a town or city.

**Transfer station:** A transfer station is a facility where waste materials are transferred from small vehicles to large trucks to be bulked up for efficient transport to treatment or disposal sites over a large distance.

**Unitary authority:** An administrative unit of Great Britain. Since 1996 the two-tier structure of local government (i.e. County Councils and District Councils) has ceased to exist in Scotland and Wales, and in some parts of England, and has been replaced by unitary authorities, responsible for all local government services.

**Waste development document (WDD):** Waste development documents are produced by Waste Planning Authorities and detail a long-term plan for the management of the waste within that authority for a specified period.

**Waste hierarchy:** This concept suggests that the most effective environmental option is 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 different purpose (reuse); 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 of (e.g. to landfill).

**Waste transfer station:** A site to which waste is delivered for sorting or baling prior to transfer to another place for recycling, treatment or disposal.

**Waste water:** Water that has been adversely affected in quality by human activities. Comprises liquid waste discharged by domestic residences, commercial properties, industry, and agricultural activities and can encompass a wide range of potential contaminants and concentrations.

**Windrow composting:** Open air composting whereby the organic waste is shredded into fine particles before being piled into open linear heaps known as 'windrows', which are approximately three metres high and four to six metres across.



## 1 INTRODUCTION

**1.1** Sustainable waste management is a key challenge facing Essex and Southend-on-Sea now and in the future. There is a need to move away from traditional forms of waste management towards greater levels of re-use, recycling and recovery.

**1.2** The planning system has an important role to play in achieving this goal. Planning helps ensure the new facilities required are sited in the most suitable locations and are well designed and carefully managed. Furthermore, the Planning Authorities have to take into account the need to minimise the amount of waste produced, targets for recycling, recovery and the amount of residual waste being landfilled.

**1.3** Essex County Council (ECC) and Southend-on-Sea Borough Council (SBC) are working jointly to prepare the Waste Development Document (WDD), which will replace the Essex and Southend-on-Sea Waste Local Plan (adopted 2001) and will cover both Essex and Southend-on-Sea's administrative areas, hereafter referred to as the "plan area". The planned date for adoption of the WDD is 2014. The base date for the Plan is 31 March 2010, and the Plan has a 21 year plan period from 1 April 2010 to 31 March 2031(inclusive). Once adopted, it will replace the saved policies in the Essex and Southend-on-Sea Replacement Structure Plan.

**1.4** The process for engaging the communities, stakeholders and consultees in the preparation of the WDD is set out in the Essex Statement of Community Involvement (SCI) adopted in 2009 and Southend-on-Sea Borough Council's SCI, also adopted 2009. As the WDD is being prepared jointly, the process must comply with both SCIs. The timetable for the preparation of the WDD is set out in the Essex Minerals and Waste Development Scheme which was updated in May 2009<sup>(1)</sup>, and the Southend-on-Sea Local Development Scheme, also updated in 2009, with a further interim revised timetable published in 2011<sup>(2)</sup>. The overall plan preparation process is summarised in Figure 1.

**1.5** We are currently at the Preferred Approach stage, which is part of the Regulation 25 consultation under the **Town and Country Planning (Local Development) (England) Regulations** (as amended in 2008<sup>(3)</sup>). The purpose of this WDD: Preferred Approach is to outline the Authorities' preferred policy approach for managing waste within the Plan area. This document has taken into account the issues raised during the Issues and Options Consultation (both from responses received and the comments from the workshop events), and identifies site specific proposals for strategic waste management facilities, drawing on the sites that have come forward through the Call for Sites. The Capacity Gap data that informed the Issues and Options Paper document has been revised, which has also been taken into account in this Preferred Approach WDD.

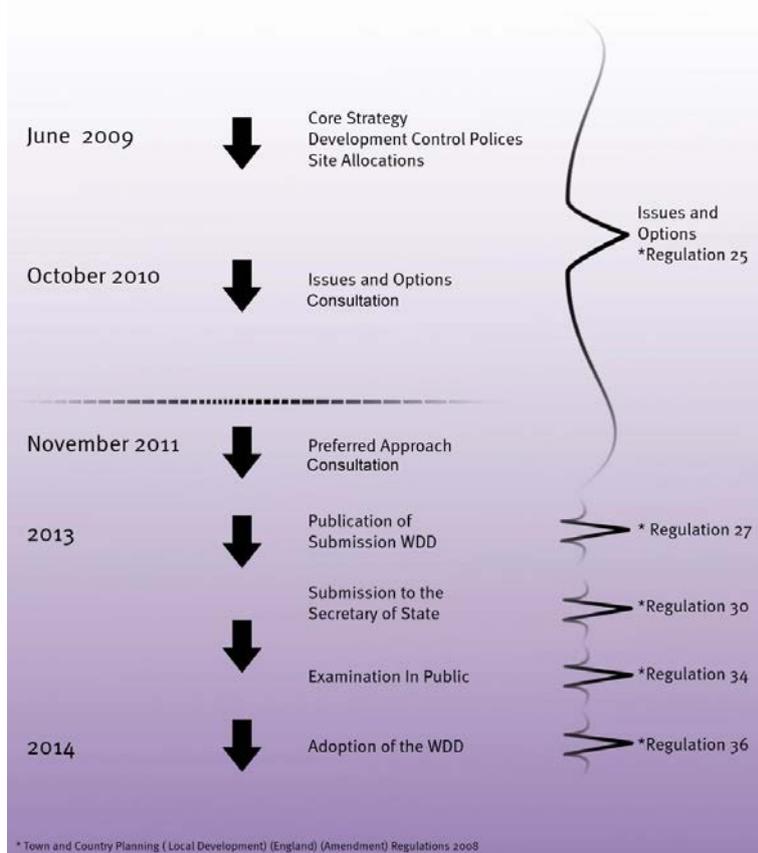
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1 <http://www.essex.gov.uk/mwds>

2 [http://www.southend.gov.uk/downloads/download/234/local\\_development\\_scheme](http://www.southend.gov.uk/downloads/download/234/local_development_scheme)

3 SI 2008 1371

Figure 1 Plan Preparation Stages of the WDD



**1.6** This document sets out our preferred approach to the Core Strategy, which provides the key principles to guide the future management of waste in the Plan area. It includes the spatial vision, strategic objectives, spatial strategy, , core policies, development management policies preferred site allocations and monitoring framework. It is possible to make sites specific comment on all the suggested sites which have been considered: these are contained within **Appendix E Preferred Sites and Non Selected Sites**, with one question per proposal/site.

**1.7** A glossary providing definitions of relevant terms and abbreviations used in this document can be found at the start of this document.

**1.8** Each preferred approach is presented in a consistent format, setting out the preferred approach and how it has been selected with regard to the following background information:

- **Evidence Base** - The preferred approach is founded on a robust and credible evidence base. Reference is made to any statistics or evidence used. Particular use has been made of the information contained in the Capacity Gap Report (September 2010) and the updated Capacity Gap Report (September 2011) referred to hereafter as the 2010 Capacity Gap Report and 2011 Capacity Gap Report respectively;
- **Sustainability Appraisal/ Strategic Environmental Assessment (SA/SEA)** – Our preferred approaches have been subject to a formal SA/SEA published with this document. This forms the appraisal of the current stage of the WDD following the earlier SA of the WDD: Issues and Options Paper in October 2010. The SA/SEA report contains an assessment of each preferred approach to determine if there will be any significant impacts on the economic, social and physical environment of Essex and Southend-on-Sea (and beyond). There is also a Site Assessment methodology to identify any significant impacts

of the Preferred Site allocations and an assessment of the Non Selected Sites. The list of sites and details of the site selection methodology is contained in Chapter 8 of this document, full details are set out in **Appendices D & E**. Within **Appendix E** comments can be made on all suggested sites. Regard has also been given to the Strategic Flood Risk Assessment (SFRA) and Habitats Regulations Assessment (HRA);

- **The Vision** - all policies and preferences are to be informed by and translate the vision. The vision is the key to place shaping; bringing together how the plan will be implemented with the approach to sustainable waste management development in Essex and Southend-on-Sea's unique context;
- **Consultation Responses** - the intent of this document is to capture the essence of what stakeholders and the wider community have said in response to the WDD: Issues and Options Paper 2010 and within the workshops held by the Authorities' during the previous consultation period;
- **Reasonable alternatives** – where any reasonable alternatives were considered in the WDD: Issues and Options Paper (or raised in the consultation responses), an overview of the advantages and disadvantages of each is given in **Appendix A**, with an explanation of why those alternatives were not pursued.

**1.9** A matrix showing how the WDD: Issues and Options have been addressed through the Preferred Approaches is presented in **Appendix B**.

**1.10** **Appendix C** lists the permitted strategic waste management facilities which are proposed to be safeguarded as outlined in Preferred Approach 4.

**1.11** The Site Assessment and Selection Methodology is set out in detail in **Appendix D** and full details of the Preferred Sites and Non Selected Sites are set out in full in **Appendix E** where **comments are invited on the specific sites**.

**1.12** The final chapter in this document asks if there is anything we have missed, and provides an opportunity for consultees to respond accordingly.

## Consultation Period

**1.13** The WDD Preferred Approach consultation runs for 8 weeks from 24 November to 19 January 2011. We are asking for your opinions on the preferred approaches and preferred site allocations and non-selected sites set out in this document. Your comments will help us shape the submission version of the WDD, and so please get involved at this stage and have your say.

## How to Respond

**1.14** The WDD: Preferred Approach document asks a range of questions about future waste management in Essex and Southend, on which we need your views.

**1.15** The Authorities would prefer responses to be made online, in line with the Government's approach to providing services electronically. The WDD: Preferred Approach consultation documents can be accessed via the Internet at <http://consult.essexcc.gov.uk>. This provides an interactive service through which you can review and comment on the documents and previous comments received.

**1.16** However, there are a number of other ways to respond. The consultation documents will also be published on the Councils' websites, where they can be viewed online or printed as required. There is a standard response form available on each Council's website that can be downloaded and completed electronically. The form should be used to respond to all questions; any responses that do not fit in the space provided should be clearly marked on a separate page and attached to the form.

- For the Essex County Council website go to: [www.essex.gov.uk/WDD](http://www.essex.gov.uk/WDD)
- For the Southend-on-Sea Borough Council website go to: [www.southend.gov.uk/WDD](http://www.southend.gov.uk/WDD)

**1.17** Hard copies of the main WDD consultation document and Appendices will be made available for inspection at libraries across Essex and Southend, at District and Borough Council offices in Essex and at County Hall in Chelmsford and at the Civic Centre in Southend. In addition hard copies of the supporting background documents are available to view at the District and Borough Council offices in Essex, County Hall in Chelmsford and the Civic Centre in Southend. All of the documents are available to view online and on CD.

**1.18** Completed hard copy response forms should be returned within the 8 week consultation period using one of the following methods:

- Online website at: <http://consult.essexcc.gov.uk>
- Email to: [mineralsandwastepolicy@essex.gov.uk](mailto:mineralsandwastepolicy@essex.gov.uk) or [debeeskinner@southend.gov.uk](mailto:debeeskinner@southend.gov.uk)
- Fax to: 01245 437 213
- Post to:

Minerals and Waste Planning Policy,  
Freepost CL3636  
Essex County Council  
E3 County Hall  
Chelmsford  
CM1 1QH

Southend-on-Sea Borough Council  
Strategic Planning Group  
PO Box 5557,  
Victoria Avenue  
Southend-on-Sea  
SS2 6ZF

**1.19** Please be aware that for your response to be accepted it must include your name and full postal address. All responses will be publicly available in accordance with the Local Government Act 2000 and will be made available to view online. Personal information such as email, phone number and address will not be published. Please note that because of the high number of responses anticipated it will take longer to make letter and email responses available to view to the public and so if you want your response to be immediately available to view on-line, please complete the online response form (see 1.15 above).

### Exhibitions / Drop-In Sessions

**1.20** Minerals and Waste Planning staff will be available at venues across Essex and Southend-on-Sea during the consultation period to answer your queries on a one to one basis. Venues will be located near both Preferred Sites and non-selected sites. The timetable for these events is available on both websites and will be distributed to Parish and Town Councils.

## Workshops

**1.21** A facilitated workshop will be held during the consultation period on the topic on "how to actively promote the waste hierarchy" a preferred approach in the WDD. This will provide an opportunity for discussion and debate on key aspects of the WDD: Preferred Approach document. Details of the date and location are available on our website. Please register to book a place, by emailing your interest to [mineralsandwastepolicy@essex.gov.uk](mailto:mineralsandwastepolicy@essex.gov.uk).

## What Happens Next?

**1.22** Your views gathered during consultation on this document (as well as any new or revised information, including the Sustainability Appraisal) will be taken into consideration when preparing the Waste Development Document Proposed Submission version.

**1.23** Consultation on the Submission version is scheduled towards the end of 2012 before the document is submitted to the Planning Inspectorate for the Examination in Public (EiP).

## 2 SPATIAL AND POLICY CONTEXT FOR THE WDD

**2.1** The purpose of this chapter is to set out the spatial and policy context for the WDD, by providing a summary of the history and geography of Essex and Southend-on-Sea which has an influence on waste arisings, how and where waste can be managed; as well as the key policy and legislative requirements for waste management in Essex and Southend.

### Spatial Context

**2.2** The Plan area comprises Essex County Council and the unitary authority of Southend-on-Sea. Essex is located to the north-east of London, within the East of England region, and borders the counties of Hertfordshire, Suffolk, Cambridgeshire and Kent (the latter in the South East region), with Greater Essex including the unitary authorities of Southend-on-Sea and Thurrock. Within the County of Essex, the two-tier administrative system includes 12 District and Borough Councils. Southend-on-Sea is located to the south east of Essex and borders Rochford District to the north, Castle Point to the west, while the southern and eastern boundaries of the Borough are formed by the Thames Estuary.

**2.3** Most people in the Plan area live in urban areas - the largest settlements are Chelmsford, Colchester and Southend-on-Sea in the centre, north east and south east respectively. Other key urban centres are Basildon in the south and Harlow in the west. The town of Southend-on-Sea comprises most of the land area of the Borough, which has the second highest population density in the East of England region. Despite most of the population living in urban areas, three quarters of Essex's land area is rural, consisting of undulating countryside, rolling fields, picturesque and historic villages, internationally significant coastline and ancient woodlands. There are also a number of important rivers that meander through the low-lying topography of the county eastwards towards the coast, including the Stour, Colne, Blackwater, Chelmer and Crouch, while the Lee and Stort flow south towards London before joining the River Thames. Essex and Southend-on-Sea lie within a particularly dry part of the country, with an average rainfall that is 35% less than that of England and Wales as a whole. However, the low-lying coastline is susceptible to flooding and the many coastal estuaries spread this risk inland. The risk of flooding is likely to increase with climate change as a result of rising sea levels, climatic instability and more frequent extreme weather events.

**2.4** Essex and Southend's economies have grown rapidly over the last decade, along with London and the East of England region as a whole. The population has also increased during this time, which in Essex is forecast to increase by 13% or another 175,000 additional residents over the next 25 years. Southend-on-Sea is currently home to around 165,300 people and its population is also set to grow steadily.

**2.5** The figures set out in the Submitted East of England Regional Spatial Strategy<sup>(4)</sup> (RSS), suggested that 106,000 new homes would be needed in Essex and Southend between 2011 and 2031. Southend-on-Sea's Core Strategy makes provision for an additional 6,500 new dwellings between 2001 and 2021, with 3,268 being completed by March 2010. Despite the current recession and the planned revocation of the RSS, the long term ambition for continued growth is reflected in the District and Borough Local Development Frameworks throughout Essex: growth is expected to occur in all districts over the Plan period, with a particular focus on Chelmsford, Colchester, Basildon and Harlow.

4 East of England Regional Assembly (March 2010) East of England Plan 2031: Draft Revision to the Regional Spatial Strategy for the East of England.

**2.6** As well as the potential increase in municipal waste generation associated with the planned residential growth in the Plan area, there are a number of significant infrastructure schemes either planned or potentially programmed in Essex and adjoining authorities within the plan period, as well as waste arising from businesses and industry. These may also contribute significantly to construction and demolition waste generation. In addition to ongoing works for the M25 widening and the 2012 Olympics, future projects include CrossRail, Shellhaven Container Port, Bathside Bay/Haven Port, Stansted G1, Bradwell Power Station and other schemes associated with the highway network. While significant volumes of waste material will be produced, there will also be opportunities for re-use and recycling (e.g. recycled aggregates) in the construction phases of these projects to promote sustainable construction.

**2.7** The strategic road network in the Plan area is heavily influenced by the proximity of London, with key trunk routes such as the A12 and A13 radiating out from the city and into Essex. The M11 runs down the western boundary of the Plan area, and the M25 cuts across the south western corner. There are four main railway lines which travel through the Plan area from London, with two going north to Cambridge and Ipswich and two going east to Southend. Moving waste by road puts strain on an already pressurised highway network. Road movement can cause congestion, adverse local impacts and contribute to climate change. Heavy goods vehicle (HGV) movements could potentially cause congestion and adverse impacts relating to local amenity, as well as contributing to climate change. However, there are limitations with alternative transport modes as the rail network is also under pressure and is generally used for transporting material greater distances primarily to import waste (which is something that the WDD is aiming to move away from). The rail network has less potential to handle movements of waste within the Plan area. Transporting waste by water, for example down the Thames out of London has been an alternative to road transport, but this approach has no regard to the need for the facility in that locality. Water transport is generally also more appropriate for transporting waste over longer distances, contrary to the principle of treating and managing waste close to its source in order to reduce transport distances.

**2.8** There is a need to improve net self-sufficiency within the Plan area by reducing both waste imports and exports to and from neighbouring authorities. London continues to be the main source of imported waste, with 605,000 tonnes being imported into the Plan area for landfill in 2009. This was a significant decrease from the previous year, but it was still far higher than the projections set out in both the Adopted RSS (2008) and the revision of the RSS submitted to the Secretary of State in March 2010 for that year, and may be connected to particular landfill sites which will cease to exist during the plan period.<sup>(5)</sup>

**2.9** Within the Plan area there are currently 299 waste facilities and the range of facility types are listed in **Table 1** below. These include licensed operational facilities, as well as facilities which are permitted but currently non operational, and facilities for which planning permission has been recently granted, or has a resolution to approve subject to legal agreements. More than a third (37%) of the 299 facilities are used for bulking, storage and then transfer of waste from the initial point of collection to either a recycling, composting, treatment facility, or landfill. A further 28% of the total number of facilities in the Plan area is used solely for metal recycling and vehicle dismantling, with 10% used for recycling construction and demolition wastes only. 20% of the facilities in the Plan area are recycling, composting or treatment facilities, with the remaining 5% being landfills.

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5 Essex County Council and Southend-on-Sea Borough Council (October 2011) Waste Development Document: Capacity Gap Report Update.

**Table 1 Existing Waste Management Facilities in the Plan Area**

Type of Facility	Number of Facilities <sup>(6)</sup>
Transfer Stations	110
Recycling Facilities	99
Composting Facilities	14
C&D recycling Facilities	32
Treatment Facilities	20
Treatment – Energy from Waste	9
Inert Landfill Sites	5
Non-Hazardous Landfill Sites	9
Hazardous Landfill Sites	1
TOTAL	299

**2.10** These facilities are dispersed throughout the Plan area (as shown in **Map 1**, below), with greater clustering in the northeast and southeast, as well as around Harlow in the West. Although landfill has traditionally been the main form of waste management within the Plan area, capacity is reducing over time and there needs to be a move away from landfill and up the waste hierarchy (see 2.14).

**2.11** With the need for ongoing economic growth including regeneration, construction and development, the volume of waste generated in Essex and Southend-on-Sea could easily increase. Essex and Southend-on-Sea therefore have a challenge ahead to minimise waste production in the first place, while ensuring adequate waste management capacity exists to meet future needs for the waste that is produced. This must be carried out in the context of the Plan area, while also protecting and enhancing the local and global environment and people's quality of life and this is summed up in Statement 1 below.

6 As of March 2011 – figures taken from the Updated Capacity Gap Report

## Statement 1

### ESSEX AND SOUTHEND-ON-SEA AT A GLANCE

#### Population and Economy

- The total population of the Plan area is 1,536,400, with both Essex and Southend's populations continuing to grow.
- There are 3 growth areas within the Plan area – the Haven Gateway, M11 corridor and Thames Gateway.

#### Transport Infrastructure

- The strategic transport network reflects the significance of London.
- Trunk roads and rail routes within the Plan area all suffer from congestion and capacity limitations.

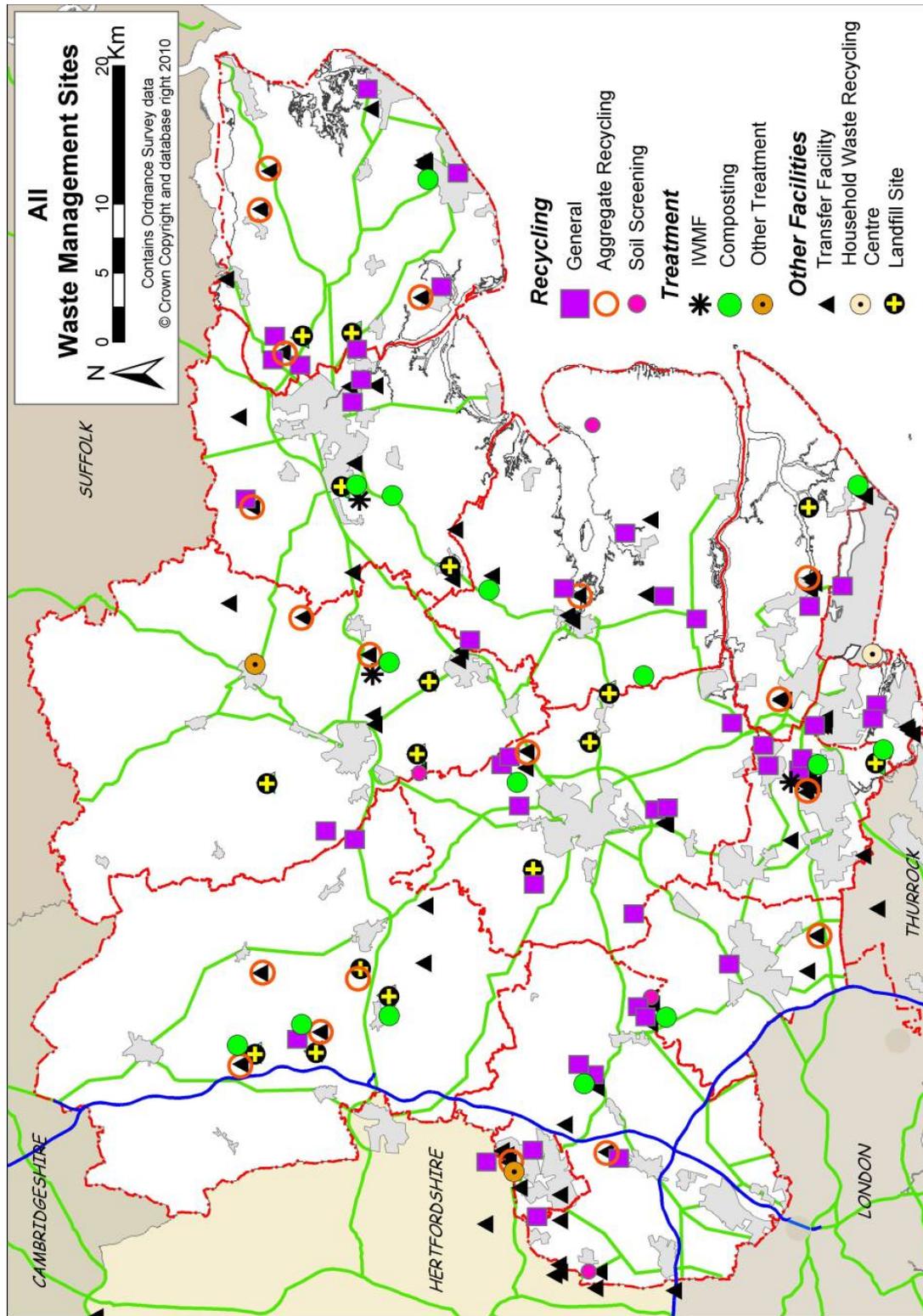
#### Environment

- 70% of Essex's 369,394ha land area is farmland, with half the soil being high grade.
- Much of the Essex and Southend coastline is adjacent to sites of international/national habitat importance and subject to development pressures.
- A total of 29 species and 15 habitats are classed as vulnerable/need protection/promotion within Essex.
- 14,075 Listed Buildings, 301 Scheduled Monuments, 37 registered Historic Parks and Gardens and 21,000 recorded archaeological sites in the Plan area.
- The East of England region is expected to face severe impacts from climate change including floods, droughts and sea level rises.

#### Waste Infrastructure

- There are currently a total of 299 waste management facilities dispersed throughout the Plan area, with greater clustering in the northeast and southeast, as shown in Map 1.

Map 1 All Existing Waste Facilities



## Policy Context

**2.12** The WDD responds to legislation and policy defined at European, national and local levels. This section summarises the key legislation and policies and their significance to the WDD.

**2.13** Of particular relevance are the targets for increasing recycling, recovery and diversion of waste from landfill which are summarised in **Table 2** and discussed further below. These targets have been taken into consideration when estimating the capacity requirements for the Plan are (summarised in Chapter 3). It is important to note that the national targets for recycling household and municipal waste include composting.

**Table 2 Recycling/composting, recovery and landfill diversion targets**

Waste Type and Management Target	2010	2015	2020	2030/31
<b>Municipal Waste</b>				
Target for <b>recycling and composting</b> of household waste (a component of municipal waste) <sup>(7)</sup>	40%	45%	50% <sup>(7)</sup> (60%) <sup>(8)</sup>	-
Target for <b>recycling and composting (including anaerobic digestion)</b> of municipal waste collected at source <sup>(9)</sup>	-	-	-	65%
Target for <b>recovery</b> of municipal waste (includes the recycling and composting targets above)	53% <sup>(7)</sup>	67% <sup>(7)</sup>	75% <sup>(7)</sup>	100% <sup>(9)</sup>
Target for <b>reducing</b> the amount of biodegradable municipal waste <b>landfilled</b> <sup>(7)</sup>	75% of that produced in 1995	50% of that produced in 1995	35% of that produced in 1995	-
<b>Commercial and Industrial Waste</b>				
Target for <b>recycling, composting, anaerobic digestion or intensive treatment</b> of commercial and industrial waste <sup>(9)</sup>	-	-	-	100%

7 Waste Strategy 2007 (translates the targets from the Waste Framework Directive and Landfill Directive into UK law)

8 Joint MWMS for Essex 2007 to 2032

9 Submitted East of England RSS

Waste Type and Management Target	2010	2015	2020	2030/31
<b>Municipal Waste</b>				
<b>Construction and Demolition Waste</b>				
Target for <b>recovery</b> of construction and demolition waste <sup>(7)</sup>	-	-	70%	-
Target for <b>diversion</b> of construction and demolition waste <b>from landfill</b> <sup>(9)</sup>	-	-	-	90%

## European Legislation

**2.14** The revised Waste Framework Directive (2008/98/EC) came into force in 2010. It updates and brings together EU legislation on waste. The 'Waste Hierarchy' is the key principle of the Directive and is embodied in this WDD. **Figure 2** illustrates the principle, which prioritises waste prevention re-use and recycling (including composting) before other types of recovery and finally with disposal. The aim is for the majority of waste to be prevented and re-used, with the least amount of residual waste being sent to landfill.

**Figure 2 Waste Hierarchy**



- The most effective environmental solution is to reduce the generation of waste – *PREVENTION*, through using less material in design and manufacture, keeping products for longer, re-use and using less hazardous material.
- *PREPARING FOR RE-USE* means checking, cleaning, repairing, refurbishing whole items or spare parts that have become waste so that they can be re-used again.
- Waste materials can be turned into new substances or products through *RECYCLING*, includes composting if it meets quality protocols.

- *OTHER RECOVERY* includes anaerobic digestion, incineration with energy recovery, gasification and pyrolysis (which all produce fuels, heat and power) and materials from waste (e.g. mechanical biological treatment).
- Only if none of the above offer an appropriate solution should waste be *DISPOSED* i.e. landfilled or mass burn incinerated (ie without energy recovery).

**2.15** The revised Waste Framework Directive contains the following recycling and recovery targets, which have been adopted by the UK government and provide a framework for this WDD:

- **By 2020 to recycle 50% of waste from households** (this includes composting and reuse of waste).
- **By 2020 to recover at least 70% of construction and demolition waste.**

**2.16** The EU Landfill Directive 99/31/EC aims to prevent or reduce as far as possible negative effects on the environment from the landfilling of waste, by introducing stringent technical requirements for waste and landfill facilities and through setting targets for the reduction of biodegradable municipal waste going to landfill (see **Table 2**). This is implemented in the UK through the Waste and Emissions Trading Act 2003.

**2.17** In 2010, the UK revised its interpretation of municipal waste to include a much greater proportion of commercial and industrial waste. In view of this change, the Government Review of Waste Policy in England 2011(Defra, June 2011) confirmed that the UK met its 2010 landfill directive target.

**2.18** European Directives will continue to influence the management and disposal of waste in the Plan area and the country as a whole. Essex and Southend-on-Sea will need to continue to move towards more sustainable methods of waste management (higher up the waste hierarchy) to meet these requirements, reduce greenhouse gas emissions and move away from landfilling waste.

## National Policy and Strategy

**2.19** A range of national policy and strategy documents have guided the development of the WDD: Preferred Approach. Government Review of Waste Policy in England 2011 addresses the most effective ways of reducing waste, maximising the money to be made from waste and recycling, and how waste policies affect local communities and individual households. It specifically promotes the potential for waste to contribute to energy generation through energy recovery, including anaerobic digestion.

**2.20** The National Waste Strategy for England (2007), which translates the principles and targets of the European Waste Framework Directive and Landfill Directive into UK Law, remains relevant to this WDD. The strategy aims to:

- Decouple waste growth from economic growth.
- Meet, and exceed, EU and national landfill diversion targets (see **Table 2** above).
- Facilitate the development of necessary waste infrastructure.
- Increase levels of recycling and energy recovery.

**2.21** The two key elements of national policy driving waste away from landfill have been:

- The landfill tax: increasing the cost of disposing waste to landfill and subsequently making other waste management options more competitive.
- A landfill allowance trading scheme (LATS), which provides limits on the amount of biodegradable municipal waste allowed to landfill.

**2.22** However, the Government is ending LATS at the end of the 2012/13 scheme year. It recognises that LATS has been effective in kick starting significant efforts to divert waste away from landfill, but the rising level of Landfill Tax means it is now by far the more significant driver.

### **Planning Policy Statements**

**2.23** The draft National Planning Policy Framework (NPPF, July 2011) does not contain specific policies relating to waste, as it is currently intended that national waste planning policy will be published alongside a new National Waste Management Plan for England (this will include a range of waste documents including replacing the National Waste Strategy 2007). However, it states that WPAs should continue with the preparation of Waste Plans with regard to Planning Policy Statement 10 (Planning for Sustainable Waste Management) (PPS 10) updated in 2011, the National Waste Strategy, the Review of Waste Policies and the EU requirements and should not be delayed due to the review of NPPF.

**2.24** Planning Policy Statement 10 (PPS10) provides the basis for preparing this WDD and determining waste planning applications. It establishes the framework for local planning policies relating to waste management and disposal.

**2.25** PPS10 advises local authorities to identify sites suitable for waste management facilities. It encourages them to consider:

- On-site management of waste where it arises.
- Locations which ensure waste management and disposal occur as close to the waste source as possible, i.e. the proximity principle.
- Use of the existing and potential transport infrastructure to support the sustainable movement of waste.
- Securing a broad range of sites, including industrial sites, brownfield land, and sites which support the co-location of facilities with complementary activities, reflecting the concept of resource recovery parks.

### **Climate Change and Renewable Energy Policy**

**2.26** Planning Policy Statement 1: Delivering Sustainable Development (PPS1) and the Supplement to PPS 1: Planning and Climate Change, recognise the role of the planning system in adapting to, and reducing the impacts of, climate change through: energy efficiency, encouraging development of renewable energy sources and energy efficiency; sensitive waste and water management practices; and sustainable design and construction of new development.

**2.27** The Supplement to PPS 1 sets out how planning should contribute to reducing emissions and stabilising climate change and take into account the unavoidable consequences. The Supplement acknowledges how local waste policy can contribute positively to climate change, particularly through combined heat and power and renewable energy supply.

## Regional Policy and Strategy

**2.28** The evidence base from the Review of the East of England Plan, which was submitted to Government in March 2010 (the Submitted RSS), provides the most useful and up-to-date data for local planning authorities to use in preparing WDDs, including shared understanding /co-operation between Waste Planning Authorities. This is fully described in the 2011 Capacity Gap Report.

**2.29** Whilst it is not expected that the Submitted RSS will be adopted, the principles and aims with regard to waste management are also considered appropriate. In particular, that 65% of municipal waste collected at source should be recycled and / or composted (including anaerobic digestion) and the remainder subjected to intensive residual treatment. This will result in 91% of municipal waste being diverted from landfill by 2030/31, which conforms to the national policy to divert as much waste away from landfill as possible.

**2.30** To achieve this ambitious target, the Plan encourages local authorities to provide sufficient facilities for the collecting, sorting and treating and disposing of waste. It also maintains the principle of net regional and sub-regional self-sufficiency for waste management.

**2.31** A major issue for Essex and Southend-on-Sea is the importation of waste from London. The Submitted RSS anticipates that by 2031 the level of imported waste from London will be reduced over time to 3% of the 2007 level of waste imported to the region. Policy WM3 in the Submitted RSS sets out the maximum quantities of municipal, commercial and industrial waste to be accepted by Essex and Southend-on-Sea from London (256,000 tonnes in 2010/11; 92,000 in 2020/21; 13,000 in 2030/31).

**2.32** The London Plan, published in July 2011, establishes the strategic planning policies to support the Mayor's draft Municipal Waste Management Strategy (published for consultation January 2010). The plan is working towards zero waste to landfill by 2031, and reducing London's reliance on exporting waste to neighbouring counties, including Essex.

**2.33** The export of waste from London to surrounding areas is a long-standing issue. The availability of void space for landfill across the greater south east has substantially reduced as sites have been restored and are no longer available. Essex and Southend-on-Sea will continue to work with other Waste Planning Authorities in the East of England, the South East and the Greater London Authority to ensure that there is reduction in the volumes of residual waste exported from London, having regard to Adopted London Plan requirements with respect to exporting waste to Essex.

## Local Policy and Strategy

### Essex and Southend-on-Sea Waste Local Plan 2001

**2.34** All of the policies of the Waste Local Plan were 'saved' in 2007 and continue to apply for determining planning applications whilst, this replacement WDD is in preparation. These include general environmental protection provisions, links to the regional and national policy framework, and safeguarding of consented and allocated sites for waste management facilities.

**2.35** The plan also sets out six preferred locations for waste management facilities at sites which are safeguarded for the future development of waste management facilities. Three of these sites have since been granted planning permission (at Rivenhall Airfield, Silver End; Land east of Warren Lane, Stanway; and Courtauld Road, Basildon) for integrated waste management facilities including Mechanical Biological Treatment.

**2.36** The plan also identified 15.46 million m<sup>3</sup> of landfill void space and at the time a further 12.93 million m<sup>3</sup> had consent and was assumed to be available by 2010 (i.e. within the time horizon of the plan)<sup>(10)</sup>. This information has been updated in the Capacity Gap Report Update 2011, as summarised in Chapter 3.

### **Municipal Waste Management Strategies**

**2.37** The Municipal Waste Management Strategy for Essex (2007-2032) was developed by the 13 waste authorities of Essex, comprising Essex County Council as the Waste Disposal Authority (WDA) and the 12 district and borough councils as the Waste Collection Authorities (WCA). The Borough of Southend's Strategy runs from 2004-2020.

**2.38** The key objectives of the strategies are broadly similar and include: encouraging waste minimisation; increasing recycling of household waste, favouring composting technologies such as anaerobic digestion (AD) for source segregated organic wastes; and exploring innovative solutions for dealing with residual waste (including Mechanical Biological Treatment). The WDD provides the spatial dimension for these objectives.

**2.39** The Essex Waste Partnership, which includes both the Waste Disposal Authorities of ECC and Southend BC, and the 12 Essex Waste Collection Authorities, was set up to deliver the Essex and Southend Municipal Waste Management Strategies by a number of joint working initiatives. One of these is the Private Finance Initiative (PFI), which has secured funding from Defra to deliver a Mechanical Biological Treatment (MBT) facility to deal with the County's residual waste. Further information can be found on the ECC website:

[www.essex.gov.uk/Environment%20Planning/Recycling-Waste/Waste-Strategy/Pages/The-Essex-Waste-Partnership.aspx](http://www.essex.gov.uk/Environment%20Planning/Recycling-Waste/Waste-Strategy/Pages/The-Essex-Waste-Partnership.aspx)

### **Essex Minerals Development Document: Preferred Approach Paper (December 2010)**

**2.40** Historically, there has been a close relationship between mineral extraction sites and landfill sites, as minerals extraction inevitably produces void space which may require infilling to achieve satisfactory site restoration. Infilling is most commonly undertaken with inert materials (e.g. construction and demolition waste). However, the approach taken in the Minerals Development Document is to try to de-couple this relationship in accordance with national policy to increase the recycling and re-use of aggregates from construction and demolition waste and the diversion away from landfill. This approach is reflected in this WDD.

### **Neighbouring Waste Planning Authorities**

**2.41** The waste authorities bordering Essex and Southend (Hertfordshire, Cambridgeshire, Suffolk, Kent, Thurrock, and several North and East London Boroughs) and the policies in their local waste planning documents will have an influence on waste planning in the Plan area. Historically, London and Kent (and to a lesser extent Hertfordshire) have exported considerable

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10 Figures include void space suitable for both inert and non-inert waste

volumes of waste to Essex for disposal to landfill. All of these authorities' plans recognise that cross-boundary movements of waste are likely to continue, but generally they are aiming towards net self-sufficiency and planning for a reduced import of waste from London.

### **Local Development Frameworks**

**2.42** The Essex Authorities and SBC are in the process of developing their LDF Core Strategies. The WDD will sit alongside these Core Strategies and be part of the Local Development Framework of each Authority. As a strategic plan, the WDD provides the overarching spatial strategy for waste and sets out a consistent strategic planning framework to enable the provision of adequate waste facilities, as well as identifying sites for the development of residual waste management facilities.

### **Enterprise Partnership**

**2.43** The South East Local Enterprise Partnership, which covers East Sussex, Essex, Kent, Medway, Southend and Thurrock was approved by the Coalition Government in November 2010.

**2.44** The LEP is a strategic body and will focus its efforts on areas of cross-border economic importance where there is added value in working together. The single goal for the LEP is to promote steady, sustained economic growth over the next two decades. In order to support the joint business and public sector overarching goal, the LEP Board has agreed four strategic objectives:

- Secure the growth of the Thames Gateway.
- Promote investment in our coastal communities.
- Strengthen our rural economy.
- Strengthen the competitive advantage of strategic growth locations.

### 3 THE WASTE CHALLENGE

**3.1** This chapter summarises and outlines how much waste the Waste DD will need to plan for over the Plan period. To forecast the amount of additional waste management facilities and landfill capacity required (the capacity gap), it is necessary to establish how much waste is currently managed in the Plan area (existing capacity), how much waste is planned (forecast) to be created over the Plan period and needs to be managed, having regard to policies and targets for waste prevention, recycling and landfill diversion (as outlined in Chapter 2). The Essex and Southend Waste Capacity Gap Report 2011<sup>(11)</sup> (the 2011 Capacity Gap Report)([www.essex.gov.uk/WDD](http://www.essex.gov.uk/WDD)), provides the full details and evidence base for calculating the need for additional types of waste facilities required to manage and dispose of different types of waste according to their respective waste streams.

**3.2** A summary is provided first in **Tables 3 and 4** below of the additional waste capacity requirements to manage and dispose of waste arising in the plan period, as well as a list of the key waste management capacity issues for the WDD. The nature of the respective waste streams and an explanation for the need for the additional facilities are described in the remainder of the chapter.

**Table 3 Future waste management capacity requirements (excluding landfill) in the Plan area up to 2031<sup>(12)</sup>**

Broad Facility Type	Estimate Capacity (Rounded) (ktpa)	Required Capacity to 2031 to meet Scenario (Rounded Up)	
		Submitted RSS (2010)	Local Waste Strategy (2011)
Transfer	1,513	1,492 ktpa (capacity surplus of 21 ktpa)	1,428 ktpa (capacity surplus of 85 ktpa)
Recycling	2,408	1,491 ktpa (capacity surplus of 1,344 ktpa) <sup>(13)</sup>	1,428 ktpa (capacity surplus of 1,407 ktpa) <sup>(13)</sup>
Composting	427		
C&D Recycling	1,681	Capacity deficit by 2020/21 (additional 511 ktpa by 2031)	
Treatment*	1,139	511 ktpa (capacity surplus of 1,699 ktpa)	575 ktpa (capacity surplus of 1,635 ktpa)
Energy from Waste*	1,071		

11 Unless otherwise stated, information regarding waste arisings and capacity requirements has been taken from the Waste Development Document: Capacity Gap Compilation Final Report (ECC and SBC, September 2010) and as updated, Waste Development Document: Capacity Gap Report Update (ECC and SBC, October 2011).

12 Source: Essex County Council (2011)

13 It is important to note that the national targets for recycling household and municipal waste include composting, hence the capacity requirements have been combined.

**Table 4 Future landfill capacity requirements in the Plan area up to 2031**

Broad Facility Type	Existing Capacity (thousand m <sup>3</sup> ) (Rounded)	Required Capacity by 2031 to meet Scenario (ktpa) (Rounded Up)	
		Submitted RSS (2010)	Local Waste Strategy (2011)
Inert Landfill	2,841	628 thousand m <sup>3</sup> required from 2019/20	
Non Hazardous Landfill	12,420	159 thousand m <sup>3</sup> surplus	782 thousand m <sup>3</sup> required from 2027/28
Hazardous Landfill	22	52 thousand m <sup>3</sup> required from 2014/15	

(14)

### Summary of the Key Waste Capacity Issues

- MSW and C&I arisings remain broadly constant.** This is due to the predicted high forecast growth rate (housing, population and economic), combined with demanding targets for moving waste up the hierarchy and improving waste prevention measures.
- Through the Waste Regulations (2011), local authorities have a duty to implement and plan according to the Waste Hierarchy. At present, too much is disposed of to landfill and with a shortage in landfill void (especially for MSW), **a shift away from landfill for both MSW and C&I waste is crucial.**
- The Waste Disposal Authorities **require a network of transfer facilities** to support their strategy for MSW and efficient transportation of waste.
- Caution should be applied to recycling and composting data. Whilst data shows there is no capacity gap for this type of waste management, in reality **there is likely to be a need for additional composting to treat MSW organic waste.**
- Total C&D recycling capacity is 1,681 ktpa, of which 1,001 ktpa is permanent capacity. C&D recycling targets mean there will be a Capacity Gap by 2020/21. To meet the gap, **at least six average sized dedicated facilities would be needed by 2031.**
- There is a capacity gap specifically relating to Clinical Treatment Facilities.** The Plan Area currently exports 470 tonnes per annum for incineration. This needs to be investigated otherwise the exportation of clinical waste will need to continue.

14 Source: Essex County Council (2011)

7. **The permitted Integrated Waste Management Facilities** (at Rivenhall Airfield, Stanway and Basildon) and other significant permissions for landfill and energy recovery **have a vital role** in ensuring the Plan Area's waste management infrastructure meets the required capacity for MSW and C&I waste. If one or all of these sites do not become operational, other waste facilities will be required.
8. There is a **need to identify additional inert landfill void space** (628 thousand m<sup>3</sup>) in the Plan Area. The additional void will be required from 2019/20.
9. Non hazardous landfill void has been improved by a currently non operational planning permission and a permission pending legal agreements. **By 2031, there is estimated to be between a surplus of 159 thousand m<sup>3</sup> and a deficit of 782 thousand m<sup>3</sup>.** There remains an emphasis on sites being able to receive MSW waste after 2015 depending on the start dates of the two planning permissions noted above. Therefore, the suitability and potential for C&I landfill sites to receive MSW and/or Solid Output Material is a **method that would reduce the impact of a shortage in MSW voidspace**, which needs to be considered in the WDD.
10. **There is a need to identify additional hazardous landfill voidspace from 2014/15** for a total of approximately 52 thousand m<sup>3</sup> until 2031. Either this will need to continue to be exported, or further voidspace planned for within the Plan area.
11. The WDD needs to **make provision for Very Low Level and Low Level Radioactive Wastes**, in line with the decommissioning of the Bradwell Nuclear Power Station.
12. **The WDD needs flexibility** to address any potential capacity gaps that arise during the plan period. The most significant gaps identified in this report are C&D recycling, clinical treatment and all landfill types.

## Question 1

### Key Issues for the WDD

Do you agree with the key Issues identified in the Capacity Gap Report set out above?  
Please explain your answer.

## Main Waste Streams To Be Managed In The Plan Area

**3.3** Waste is created from a range of different sources called waste streams, which often include similar types of waste materials. The box below sets out the different waste streams that need to be managed within the Plan area.

- **Municipal Solid Waste (MSW)**
- **Commercial and Industrial waste (C&I)**
- **Construction, Demolition and Excavation waste (CD&E)**
- **Agricultural waste**
- **Hazardous waste**
- **Clinical waste**
- **Low level radioactive waste**
- **Waste water: (sewage)**

*Explanations of the above waste streams can be found within the Glossary.*

## Current And Future Waste Arisings

**3.4** The Capacity Gap Report (2011) provides an update on the 2010 report which informed the evidence base for the Waste Issues and Options paper. The 2011 report now only uses two scenarios to forecast (or predict) how much waste might arise in the future (the Submitted RSS<sup>(15)</sup> and the Local Waste Strategy<sup>(16)</sup>). The Local Waste Strategy applies the Essex and Southend-on-Sea forecasts and targets from the Waste Disposal Authorities. The use of just two scenarios is supported by the comments received during the consultation of the WDD: Issues and Options paper.

**3.5** The total predicted waste arisings by waste stream over the 21 year plan period (from 31 March 2010) are summarised in **Table 5** below. Overall the two scenarios for forecasting waste arisings are broadly compatible, with the only difference being the higher MSW arisings within the Submitted RSS, compared to the Local Waste Strategy. It also shows that the average annual amount of waste (excluding C&D) to be managed over the plan period is comparable in both to scenarios to the total tonnes actually arising in the financial period 2009/10 (2,335 thousand tonnes).

15 East of England Plan 2031. Draft revision to the Regional Spatial Strategy for the East of England. East of England Regional Assembly, March 2010

16 Outline Business Case. Essex County Council, 2009

**Table 5 Total waste arisings by waste stream until 2030/31 (thousands tonnes)<sup>(17)(18)</sup>**

Scenario	MSW Arisings	C&I Arisings	London Imports	Total Tonnes (exc. C&D)	Annual Average (ktpa) (over the 21 years)	C&D Arisings	Total Tonnes (inc. C&D)
Submitted RSS	17,641	26,549	2,722	46,912	2,329	43,274	90,186
Local Waste Strategy	16,558	26,549	2,722	45,829	2,182	43,274	89,103
ACTUAL ARISINGS 2009/10	770	960 estimate <sup>(19)</sup>	605	2,335		1,196 estimate <sup>(19)</sup>	3,531

## Planning for self-sufficiency

**3.6** Chapter 2 outlines the national policy and legislation which seeks to ensure that communities take more responsibility for their own waste, and that Waste Planning Authorities should aim to plan for net self-sufficiency in terms of providing enough waste management capacity in the Plan area to manage the amount of waste produced in the Plan area. The emphasis is on planning for net self-sufficiency, as there is inevitably some cross boundary movement of waste, which can occur due to waste industry requirements, and on occasions where the management of waste within the Plan area may not always be the most sustainable option (e.g. if a waste management facility located just outside the border of the Plan area is closer to the source of arisings than another facility within the Plan area).

**3.7** Historically, Essex and other counties in the East of England have had to deal with large imports of waste from London, most of which has been disposed of in landfills. The availability of landfill in the East of England (and Essex) has substantially reduced in recent years. Policy WM3 in the Submitted RSS stated that the amounts of waste that the East of England should plan to accept from London will be reduced progressively over time to 2031. The expectation in the Submitted RSS and the London Plan is for London to intensively treat all of its municipal and commercial and industrial waste arisings within London and only export the residue to landfills (the London Plan is also aiming for zero waste to landfill by 2031). The Essex and Southend-on-Sea existing Waste Local Plan (Adopted 2001) similarly made allowance for a

17 Source: Essex County Council (2011)

18 Note that this table includes separate estimates for imports of waste from London into the Plan area, as well as an allowance for other imports and exports of waste that will continue to occur, as explained below.

19 Estimate for the Plan area derived from the Defra C&I Survey 2010 Actual Arisings for the whole Region

decreasing amount of London's waste to be landfilled in the Plan area, with provision beyond 2010 for some of London's pre-treated waste residues only, at a level to be determined by reviewing the Waste Local Plan.

**3.8** There are distinct cross boundary movements of waste consisting both of wastes requiring pre-treatment and final disposal. In 2009 a total of 1,511 thousand tonnes (kt) was imported and 967 kt was exported, making Essex and Southend-on-Sea an overall net importer of waste (544kt in 2009). However, as described in the 2011 Capacity Gap Report, the principal source of imported waste in the Plan area continues to be from London.

**3.9** Despite the Submitted RSS policy and projections for a decreasing rate of London's waste to be sent to landfill in Essex, the actual levels of waste imported from London for both pre-treatment and landfill are currently higher than that estimated in the Submitted RSS. Allowance for a portion of London's waste still needs to be made in the WDD, therefore Essex and Southend-on-Sea have used the Submitted RSS projections for London imports when estimating the capacity gap for the WDD. However, the available voidspace in Essex (and other counties) is running out and there is a national move towards diverting waste away from landfill. In addition to imports from London, there continues to be movement of waste between Essex and Southend-on-Sea and neighbouring authorities. There is net exportation of waste to Thurrock, the East London Waste Authority (ELWA), Cambridgeshire and Peterborough, and Suffolk. However, there is net importation into the Plan area from the North London Waste Authority (NLWA), Hertfordshire, Kent and Medway and other (non-adjacent) UK authorities. Hence Essex and Southend-on-Sea will continue to plan for net self-sufficiency and to receive a proportion of residual waste from London disposal as agreed with authorities in the East of England.

### Current Waste Management Capacity

**3.10** There are a total of 299 waste and disposal facilities within the Plan area, of which 284 are waste management facilities and 15 landfill sites. The type and estimated capacity (at 31 March 2010) of the waste management facilities are summarised in **Tables 6** and **7** below. All operational facilities have been included in the calculations, as well as facilities which are currently non operational but with valid planning permission, and facilities for which planning permission has been recently granted, or have a resolution to approve subject to legal agreements. The full list of facilities included in the estimates of current capacity is contained in Appendix D of the 2011 Capacity Gap Report.

**Table 6 Summary of waste management facility types and current capacity in the Plan area (excluding landfill)<sup>(20)</sup>**

Broad Facility Type	Total Number	Base Date Estimated Capacity (ktpa)
Transfer	110	1,513
Recycling	99	2,408
Composting	14	427
C&D Recycling	32	1,681

20 Source: Essex County Council (2011)

Broad Facility Type	Total Number	Base Date Estimated Capacity (ktpa)
Treatment	20	1,139
Treatment – Energy from Waste	9	1,071
<b>TOTAL</b>	<b>284</b>	<b>8,239</b>

**3.11** Within the broad facility type identified in the table above, there are a number of more specific facility types, which process a variety of wastes. It is noted that while the C&D recycling facilities are only used for wastes arising from construction and demolition operations, the other types of facility in **Table 6** may manage a range of different waste streams. For example, within the Transfer category, there are transfer facilities dedicated to particular waste streams only such as clinical waste, or household waste (Recycling Centres for Household Waste – RCHWs), and others that may take both household waste and commercial and industrial wastes arising from businesses and industry.

**3.12** A large number of the facilities included in the Recycling category are metal recycling sites (MRSs) and/or end of life vehicle (ELV) facilities which only deal with scrap metals and vehicle components. The remainder are Materials Recycling Facilities (MRFs) which take both household waste and wastes arising from businesses and industry.

**3.13** The Composting category includes open windrow composting as well as enclosed facilities known as in-vessel composting facilities. These generally accept municipal waste (including household food and garden wastes as well as garden waste from Council managed parks and gardens) and some commercial and industrial organic wastes.

**3.14** The Treatment category includes Mechanical, Biological and Treatment plants (MBTs), clinical treatment facilities (although none are in the Plan area), Waste Electronic and Electrical Equipment treatment facilities (WEEEs), other types of incineration (e.g. pet crematoria) and hazardous waste treatment facilities. The 'Treatment – Energy from Waste' category includes treatment facilities that generate energy through the processes used to treat the municipal, commercial and industrial wastes, i.e. pyrolysis and gasification, anaerobic digestion, incineration and autoclaving.

**Table 7 Summary of landfill types and current capacity in the Plan area**

Broad Facility Type	Total Number	Base Date Estimated Capacity (Thousand m <sup>3</sup> )
Inert Landfill	5	2,841
Non Hazardous Landfill	9	12,420 (net)
Hazardous Landfill	1	22
<b>TOTAL</b>	<b>15</b>	<b>15,283</b>

**3.15** Inert landfills are dedicated to receiving inert waste, such as brick, concrete, subsoil and topsoil from construction, demolition and excavation activities. Non hazardous landfills which primarily receive MSW and/or C&I waste, also receive a proportion of inert waste that is used as a daily cover over the non hazardous landfill sites, and this is estimated to take up 20% of the voidspace. There is one hazardous landfill facility within the Plan area taking Stable Non Reactive Hazardous Wastes (SNRHW) (mainly asbestos), but planning permission expires in 2013.

### Future Waste Management Capacity Requirements

**3.16** By comparing the estimated current capacity in the Plan area with the estimates of future waste arisings summarised above, it is possible to estimate any gap in the requirements for future waste management capacity.

**3.17** The capacity gap has been estimated for each broad facility type by comparing the different management requirements for each waste stream with the current capacity provided for that management type. For example, MSW and C&I waste have various national and regional targets for recycling, composting and treatment that must be met (as summarised in Chapter 2). These targets have been taken into account in the forecasts of future waste arisings described in the Capacity Gap Reports and summarised in the table above. Recycling, composting and treatment of MSW and C&I waste will be carried out in those facilities categorised as recycling, composting and treatment, therefore the future management requirements are compared against the current capacity already provided within these types of facilities in the Plan area.

**3.18** **Table 3** summarises the future capacity requirements by facility type for each scenario used (the Submission RSS and the Local Waste Strategy (LWS), within the Plan area up to 2031.

### Transfer Facilities

**3.19** There are no direct targets for future transfer capacity. The traditional purpose for a transfer station was to bulk up waste for onward distribution to landfill. However, commercial transfer stations increasingly sort and separate different types of waste (e.g. plastics, metal, paper, wood, and glass) to be bulked up into larger volumes for onward distribution for recycling, treatment or disposal, thereby increasingly diverting waste from landfill. The bulking up of these wastes into larger volumes also ensures more efficient transport of waste. Therefore, it is assumed that most waste will be processed by transfer facilities before going on to other processes such as recycling and treatment. This would mean the requirement for transfer facilities is proportionate to the amount of waste being produced and targets for other facilities such as recycling, composting and treatment. Therefore, as recycling and treatment targets and capacity requirements increase, there will be a greater need for transfer facilities. As part of the assumption, the most challenging targets (recycling targets) were adopted for use in predicting the increased requirement for transfer facilities.



**3.20** There is an existing transfer capacity of 1,513 ktpa in 110 facilities (see **Table 6**). These are predominantly for commercial and industrial waste, although eight transfer stations (excluding the RCHWs) are used to transfer MSW. Within both the scenarios, there should be a small surplus of waste transfer capacity at the end of the plan period. However, the Waste Disposal Authorities have identified the need for additional MSW transfer stations.

## Recycling and Composting Facilities

**3.21** The recycling and composting facilities are combined to reflect the combined statutory targets to improve recycling and composting of MSW (see **Table 3**), however, recycling capacity greatly exceeds composting capacity. There are currently 99 recycling facilities in the Plan area with capacity of 2,408 ktpa and 14 composting facilities with a smaller capacity of 427 ktpa. However, nearly half of the recycling capacity (1,083 ktpa) is provided in End of Life Vehicle facilities (ELV) and Metal Recycling Sites (MRSs).



**3.22** Under both forecast scenarios, there is a surplus in recycling and composting capacity from 1,344 to 1,407 ktpa, which indicates there is no requirement to plan for new recycling or composting facilities. However, as noted above, ELV and MRS facilities provide nearly half of the recycling capacity, which has limited contribution to recycling of municipal waste. It is therefore anticipated that the amount of combined surplus capacity is lower than that stated, albeit still a surplus, although that is likely to be in the recycling capacity rather than composting. Therefore additional composting capacity will be needed during the Plan period.

## Inert Waste Recycling Facilities

**3.23** There are 32 inert (or C&D) waste recycling facilities in the Plan area providing 1,681 ktpa capacity per year. Approximately 60% of the current C&D recycling capacity (1,001 ktpa) is provided by permanent facilities. The other 40% is located in temporary facilities, which are predominantly sited on mineral workings and landfill sites to enable diversion of inert wastes from landfill. These facilities will not all be available throughout the whole of the Plan period, as mineral permissions are progressively worked and site restoration completed. Therefore, the recycling capacity is assumed to reduce over time as the temporary permissions cease, such that there will be a capacity deficit from 2020/21, reaching 511 ktpa by 2031, which means the provision of new C&D recycling facilities needs to be planned for in the WDD.



## Treatment and Energy from Waste Facilities

**3.24** Twenty facilities are categorised as treatment facilities in the Plan area, providing 1,139 ktpa capacity, and a further 1,071 ktpa capacity is provided in nine energy from waste facilities. This includes the facilities proposed at the three Integrated Waste Management facility sites with planning permission. This creates a total capacity of 2,210 ktpa for treatment and energy from waste, which, when compared with the forecast treatment requirements for MSW and C&I waste represents a capacity surplus. It is concluded that there is no further requirement to plan for treatment or energy from waste facilities assuming all of the non-operational facilities are developed and operational before the end of the Plan period.



**3.25** Finally, as there are currently no operational or planned clinical waste treatment facilities in the Plan area, all clinical waste is transferred to facilities outside the Plan area. Thus, there is a capacity gap for clinical waste treatment within the Plan area, which may need to be planned for if there is a viable amount of clinical waste arising, otherwise it may be more appropriate to continue exporting this waste for disposal.

**3.26** Waste Planning Authorities need to demonstrate cross boundary working can be successfully achieved, where there is a reliance on waste management capacity being provided outside its administrative boundary; providing clear and robust evidence for this capacity over the life of the Plan. Both Suffolk County Council and Cambridgeshire County Council have been contacted to determine if there is sufficient capacity to continue to accept Essex and Southend's clinical waste. Both counties have indicated that they expect there to be sufficient capacity to continue receiving similar volumes of this type of waste for management during the plan period. This would be provided at the existing sites, or within an area of search for a replacement clinical waste plant (Energy from Waste) if required in Cambridgeshire.

### Waste Water Treatment Works

**3.27** A study was undertaken to determine any need for additional waste water treatment works (WWTWs) in the Plan area<sup>(21)</sup>. Amongst other evidence, this study considered Water Cycle Strategies that have commenced in the Plan area and investment plans of the sewerage undertakers – Anglian Water Services (AWS) Limited and Thames Water Utilities (TWU) Limited. Consideration was given to the demands resulting from population growth and any reductions in water use over time.



**3.28** Additional waste water treatment capacity will need to be found that is nearly the equivalent of the combined capacity of Chelmsford and Colchester WWTWs, the second and third largest works in the Plan area. However, it is anticipated that this capacity can be met through upgrades to existing works, rather than any requirement for new plants, although there may be circumstances where the location of new growth makes it more cost effective to provide new works.

### Future Landfill Capacity Requirements

**3.29** Even once the targets for recycling and treatment of MSW and C&I waste have been met, there will continue to be a need for disposal of pre-treated residual waste including the residues arising from new treatment processes. In addition, despite high recycling rates of C&D waste, there also continues to be a need for inert landfill capacity. **Table 7** summarises the future capacity requirements for landfill in the Plan area up to 2031.

### Inert Landfill

**3.30** There are currently five operational inert landfill sites and one with recent planning permission dedicated to receiving solely inert waste and seven currently operating non-hazardous landfill sites which accept a proportion of inert waste. The Plan area has a total inert landfill capacity of 2,841 thousand m<sup>3</sup>. Even with the challenging targets to re-use and recycle C&D waste (90% landfill diversion by 2031) there will still be a need to plan for additional inert landfill capacity. Based on the estimated total of C&D waste arising over the Plan period, there is likely to be a gap in inert landfill capacity of 628 thousand m<sup>3</sup>, which will need to be planned for from 2019/20.

21 Background Paper Waste Water Treatment, Essex and Southend-on-Sea Waste Local Development Framework. Clover Planning, June 2010.

## Non Hazardous Landfill

**3.31** There are a total of nine non-hazardous landfills sites exist which receive MSW and C&I waste with a net capacity of 12,420 thousand m<sup>3</sup>. These nine sites include two non-operational sites, of which one is permitted (Stanway) and one has a resolution to approve, subject to legal agreements (Crumps Farm). Seven of these nine landfills can receive both MSW and C&I waste, and two sites are restricted to C&I waste only. However, five of the operational sites which receive MSW have permissions which are due to expire by 2015.



**3.32** The planning permission at Stanway is part of an integrated waste permission in which the landfill is for 7.4 million m<sup>3</sup> of residual waste which has been pre-treated on site. The commencement date for the permission is May 2015, but there could be an 18 month period after commencement while the site is being prepared before residual landfill could commence. The life of the permission extends beyond the plan period, as such only the proportion of landfill available during the plan period (3.45 million m<sup>3</sup>) has been taken into account, with the remaining 4 million m<sup>3</sup> available beyond the plan period.

**3.33** Based on the estimated volumes of MSW and C&I waste that will still need to be landfilled after increasing prevention and reuse, and recycling and treatment targets have been met, under the worst case scenario of higher arisings (as forecast in the Local Waste Strategy scenario) there could be a non-hazardous landfill capacity gap of 782 thousand m<sup>3</sup> by 2031 (new landfill capacity would be needed from 2027/28). However if more MSW and C&I waste is pre-treated (as forecast in the Submitted RSS scenario), then there could actually be a small surplus in non-hazardous landfill capacity (159 thousand m<sup>3</sup>) at the end of the Plan period.

## Hazardous Landfill

**3.34** The single hazardous landfill facility within the Plan area has been granted an extension of time until 2013 only. This means that by the time of adoption of the WDD (2014) there will be no landfill voidspace for Stable Non Reactive Hazardous Wastes (SNRHW). Approximately 52 thousand m<sup>3</sup> hazardous waste will require disposal to landfill between 2014 and 2031, which represents only 0.06% of the total amount of waste that needs managing over the Plan period.

## Radioactive Wastes

**3.35** Bradwell Nuclear Power Facility which is being de-commissioned is the principal source of radioactive waste arisings within the Plan area. A small amount of other radioactive waste is generated by hospitals and academic/research organisations in the Plan area. The arisings comprise Very Low Level (VLLW), Low Level (LLW) and some Intermediate Level (ILW) Radioactive Wastes. During the decommissioning process of the Bradwell Nuclear Power facility there is a need for storage, treatment and disposal of these wastes, and this is being addressed through an existing planning permission allowing for ILW to be managed and stored before this is exported to the National Repository for Radioactive waste in Cumbria.

**3.36** The government's National Policy Statement (NPS) for Nuclear Power Generation<sup>(22)</sup>, is considering the Bradwell site alongside other sites nationally for future nuclear energy development. If the Bradwell site is selected as one of the suitable sites for nuclear energy development, then there would be further arisings of ILW in the Plan area. The fate of these materials depends on the progress of the Government on the new national geological radioactive waste repository to replace the existing repository at Cumbria. ILW is of national importance and would need to be considered in the context of the future national repository arrangements and not with the WDD.

**3.37** As the status of a new Bradwell power station and the existing and new national repositories are still uncertain, this waste stream cannot be planned for at this stage. Therefore, the WDD: Preferred Approach must address this issue, and be flexible enough to deal with the two options:

- Plan for small quantities of low and very low level radioactive waste for storage from decommissioning the current Bradwell nuclear power station only.
- Plan for larger quantities of waste generated from the possible development of a new nuclear power facility within the plan period.

## Question 2

### Capacity Gap Report Update

Do you agree with methodology and approach in the Capacity Gap Report? Please explain your answer.

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22 National Policy Statement for Nuclear Power Generation (EN-6) Volumes I and II. Department of Energy and Climate Change, July 2011.

## 4 THE CORE STRATEGY

**4.1** This chapter sets out the preferred vision for Essex and Southend-on-Sea by 2031, with preferred strategic objectives, overall spatial strategy including the safeguarding of sites to achieve this vision.

### Vision

**4.2** The spatial vision paints a picture of where Essex and Southend-on-Sea should be by the end of the Plan period. It should be locally distinctive and both challenging and deliverable - a goal we can aspire to and have a realistic prospect of achieving.

**4.3** In the Issues and Options document, a number of issues for the WDD were set out, which need to be reflected in the Vision, and these can be broadly summarised as:

- **Meeting waste policy and legislation** – as summarised in Chapter 2, the main aims of national waste policy and legislation are: minimising waste; increasing re-use; for waste that cannot be re-used, prioritising recycling, then treatment and recovery of value (including energy from waste) in order to divert more waste from landfill; and planning for net self-sufficiency in waste management. In addition, the recent national Waste Policy Review recognises the benefits of more sustainable waste management (e.g. financial benefits of waste minimisation and re-use for businesses, but also opportunities for growth in the collection, recycling, reprocessing and recovery of waste). The WDD also needs to support the Plan area's communities to take greater responsibility for dealing with waste according to this waste management hierarchy.
- **Responding to population and economic growth** – The scale and distribution of future waste management facilities needs to reflect future population and economic growth, there is projected growth across the whole Plan area but with most growth concentrated in Colchester, Chelmsford, Harlow, Basildon and Southend-on-Sea in particular.
- **Reducing the impacts of waste management on climate change and ensuring waste infrastructure is adapted to potential impacts of climate change** – Greenhouse gas emissions arise from landfill, treatment facilities and from transport of waste. Waste infrastructure needs to incorporate sustainable design and construction techniques that minimise water use and flood risk on and off site. Facilities must be planned to avoid areas at risk of coastal and fluvial flooding, in order to respond to potential increases in flooding, coastal erosion and reduced water supply as a result of climate change.
- **Protecting the environment and human amenity** – Future development of waste management facilities will need to be sensitive to the distinctive landscape character, historic settlements and sites in the Plan area, as well as nature conservation assets, particularly in coastal areas. Human health and amenity should be protected from unacceptable effects from waste facility design and operation, including the transportation of waste.

## Proposed Vision

By 2031, Essex and Southend-on-Sea will have achieved net self-sufficiency in our waste management; the importation and disposal of London's waste will have been reduced through annual targeted reduction. Households, businesses, shops, industry and public sector and voluntary organisations in Essex and Southend-on-Sea will be taking responsibility for preventing waste in the first instance, and where this is not possible, re-using waste. Any waste materials that cannot re-used, will be recycled, composted or treated (with value recovered where possible), within waste management facilities in the Plan area to maximise diversion from landfill.

We will have provided sufficient waste management infrastructure in Essex and Southend-on-Sea to meet existing demand and the planned growth in Colchester, Chelmsford, Harlow, Basildon and Southend, with greater provision of facilities to serve the central, southern and northeast parts of the Plan area to ensure the majority of waste is managed and treated close to its source whilst also ensuring rural areas are adequately served.

Our waste management infrastructure will be well designed and operated. This will help to deliver more sustainable waste management processes higher up the waste hierarchy. We will have a small number of integrated waste management sites with co-location of complementary waste facilities on them to encourage synergies and efficiencies in waste management and transport. These will be supported by a network of transfer, recycling and composting facilities.

Waste management facilities will be located, designed and operated to minimise potential adverse impacts on the general amenity of local communities, the natural environment and the landscape and townscape of Essex and Southend. Waste management within the Plan area will be undertaken in ways that avoid contributing to climate change and are adapted to the adverse effects of climate change, including reducing the risk of flooding, particularly in the low-lying coastal areas of Essex and Southend-on-Sea and reducing distances waste is transported.

## Question 3

Do you agree with the Vision set out above? Please explain your answer.

## Strategic Objectives

**4.4** The following strategic objectives are proposed, to support the Vision.

**SO1:** To work with the partner organisations including the Waste Disposal Authorities, Waste Collection Authorities, Environment Agency, waste industry, the business sector and voluntary organisations to promote and maximise waste prevention measures amongst all waste producers.

**SO2:** To increase the quantity as well as the quality of waste that is re-used, recycled and recovered within the Plan area to meet local targets for recycling and recovery and reduce the amount of waste sent to landfill.

**SO3:** To achieve and continue to deliver net self-sufficiency in waste management by 2031, with a substantial reduction in the amount of waste from London that is disposed of in the Plan area.

**SO4:** To safeguard and encourage opportunities to enhance existing strategic waste infrastructure at sites including the permitted Integrated Waste Management Facilities that serve the Plan area, especially facilities that serve the key urban centres.

**SO5:** To ensure suitable strategic site allocations are made to meet the predicted need for additional transfer stations, C&D recycling, composting, treatment and landfill facilities.

**SO6:** To pursue opportunities to reduce carbon emissions, for example through energy recovery and utilisation, by reducing transport distances with promotion of development on appropriate employment land in urban areas.

**SO7:** To maximise opportunities for sustainable economic growth by using waste as a resource for local industry and as a source of energy.

**SO8:** To ensure new waste facilities are sustainably designed, constructed and well operated to reduce potential adverse effects on human health, amenity and the environment.

## Evidence Base for the Vision and Strategic Objectives

PPS12 (2008) describes the important role of the Vision for a development plan document in place shaping. It should produce a vision for the future that responds to the local challenges and opportunities, and is based on evidence, a sense of local distinctiveness and community derived objectives, within the overall framework of national policy and regional strategies. It also states that in addition to producing an overall vision, every local planning authority should produce strategic objectives for the area focusing on the key issues to be addressed.

### Sustainability Appraisal/HRA

#### The Vision

The Vision strongly adheres to the sustainable management of waste through a commitment to national policy and guidance without disregarding the Plan Area's key issues and requirements. A commitment to moving waste management up the waste hierarchy, particularly recycling, is also consistent with the minerals supply hierarchy as specified in the emerging Minerals Development Document.

#### The Strategic Objectives

The Strategic Objectives will have significant and multiple positive impacts on ensuring the sustainable management of waste. In addition, the Strategic Objectives will have significant positive impacts on maximising the sustainable use of land, energy efficiency and the proportion of energy generated from renewable sources, protecting human health and well being and maintain the quality and quantity of public open space amenity in the Plan Area, and maximising opportunities for economic development, including jobs, arising from waste related activities.

### Consultation Responses to WDD: Issues and Options Paper – Issue 4: Proposed Vision and Strategic Objectives (Question 8)

Of the 27 respondents, 20 agreed that the proposed vision and strategic objectives encompassed all the elements they should, and so there was broad support. A number of detailed comments were made on particular objectives and wording, and these have been taken into consideration when drafting the Preferred Approach to the Vision and Strategic Objectives.

## Question 4

Do you agree with the Vision and Strategic Objectives set out above? Please explain your answer.

## How The Waste Development Document Will Help Deliver The Vision And Strategic Objectives

**4.5** The WDD Preferred Approaches provide more detail about how the WPAs will seek to deliver the Vision and Strategic Objectives.

**4.6** The 2011 Waste Regulations impose a duty on the WPAs to actively promote the waste hierarchy in reaching planning decisions. The Preferred Approach document and spatial strategy have therefore been prepared and presented to reflect the waste hierarchy and is ordered as outlined below:

- **The Waste Hierarchy:** The WPAs will actively promote the waste hierarchy in reaching planning decisions as set out in Preferred Approach 1;
- **Waste Prevention and Re-use:** Waste prevention and re-use are at the top of the hierarchy. This is addressed in Preferred Approach 2;
- **Spatial Strategy:** The preferred overall spatial strategy for achieving net self-sufficiency in waste management in the Plan area is set out in Preferred Approach 3. As part of achieving the spatial strategy, operational strategic waste facilities and sites with planning permission for strategic waste facilities are safeguarded under Preferred Approach 4;
- **Recycling and Composting:** Preferred Approach 4 safeguards sites with strategic recycling and composting facilities essential for delivery of the Joint Municipal Waste Management Strategy. Only a small amount of new composting capacity is required, therefore Preferred Approach 5 allocates some suitable sites that could accommodate composting facilities. Additional recycling and composting facilities will be encouraged through positive locational criteria as set out in Preferred Approaches 6 - 11;
- **Residual Waste Treatment:** Preferred Approach 4 safeguards strategic treatment sites, including the three sites with planning permission for integrated waste management facilities which are also allocated under Preferred Approach 5 as preferred sites. Additional treatment facilities will be encouraged through positive locational criteria as set out in Preferred Approaches 6, 13, 14 and 15;
- Provision for **Waste Water Treatment** is made at Preferred Approach 12;
- **Disposal:** The Vision and Strategic Objectives of the WDD seek to ensure that value is recovered from waste prior to disposal so that only residual waste is disposed of, to reduce reliance on landfill and actively promote waste management up the waste hierarchy. However, there is still a requirement for new inert waste landfill sites. Some of the suggested sites may be suitable for partial infill, but the selection will depend on whether these sites come through as preferred sites for the Minerals DD as set out in Preferred Approach 16. Any new non-hazardous and hazardous landfill capacity required will be considered against criteria in Preferred Approaches 17 and 18. Proposals will be expected to demonstrate the waste to be disposed of could not reasonably and practicably have been treated otherwise. Preferred Approach 19 addresses the issues of landraising for its own sake. Provision is

also made for the storage of radioactive wastes arising from Bradwell Nuclear Power Station and disposal of a small amount from hospitals and academic or research organisations in Preferred Approach 20;

- **Development Management Policies:** Preferred Approach 21 addresses mitigating and adapting to **climate change**. **Transport** of waste and maintaining capacity of the **highway network** is addressed in Preferred Approach 22. Preferred Approach 23 complements the core strategy preferred approaches and will ensure all new waste related development maximises opportunities for **economic, social and environmental** benefits while minimising any potential adverse impacts.

## Waste Hierarchy

**4.7** The Waste Hierarchy, as set out in the EU Waste Framework Directive and translated into national policy through Planning Policy Statement 10 (2011), is well established in waste policy from the European to local level. It is of overarching importance and sets out a series of principles for more sustainable waste management.

**4.8** The Waste Hierarchy is a sequential order of preference for different approaches to waste management, within which **prevention** of waste arisings is the first priority. After waste prevention the next preferred approach in the hierarchy is to make best **use of waste** that does arise, followed by **recycling** in order to reduce the amount requiring eventual disposal. Waste can serve a useful purpose by replacing other materials that would otherwise have been used, i.e. **recovering** value from the waste through composting, treatment and energy from waste processes. Energy should be **recovered** from waste wherever possible with **disposal** of residual waste as a last resort.

**4.9** The intention is that, in making decisions about waste management, greater weight should be attributed to those waste management methods that are towards the top of the Hierarchy. Essex and Southend-on-Sea already follow the principles of the waste hierarchy through the adopted Waste Local Plan (2001), but more sustainable waste management will require a greater proportion of waste management to take place further up the waste hierarchy and this is to be actively promoted in accordance with the new Waste Framework Directive.

## Preferred Approach 1

### Waste Hierarchy

The WPAs will actively promote waste management up the waste hierarchy, using the principles to inform the capacity gap requirements and ensure they are embedded within the WDD.

In determining planning applications for waste management proposals, the WPAs will promote waste reduction, re-use of waste, waste recycling, composting, energy recovery from waste and waste disposal in that order of priority, and will have regard to whether the proposal would conflict with other options further up the waste hierarchy.

Integrated schemes for recycling, composting, materials recovery and energy recovery from waste will be supported where this is shown to provide benefits in the management of waste that would not otherwise be obtained.

#### Reason:

*The 2011 Waste Regulations impose a duty on the WPAs to actively promote the waste hierarchy in reaching planning decisions. Policy W3A in the Essex and Southend-on-Sea Adopted Waste Local Plan includes a similar requirement, and during the monitoring period 1<sup>st</sup> April 2009 to 31<sup>st</sup> March 2010 was one of five the most frequently referred to WLP policies when making planning application decisions. Integrated schemes where more than one waste management facility are developed on the same site fit with the principles in the Vision of co-location and reducing transport distances<sup>(23)</sup>.*

### Question 5

Do you agree with the Preferred Approach 1 set out above? Please explain your answer.

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23 Minerals and Waste Annual Monitoring Report. 1st April 2009 - 31st March 2010. Essex County Council, December 2010

**Evidence Base for Preferred Approach 1**

The Waste Hierarchy is set out in the EU Waste Framework Directive and translated into national policy through Planning Policy Statement 10 (2011), and WPAs are required by the 2011 Waste Regulations to promote it in planning decisions.

**Sustainability Appraisal**

There will be significant positive impacts on the sustainable management of waste through the promotion of waste reduction, re-use of waste, waste recycling, composting, and energy recovery from waste above disposal in the hierarchy.

**HRA**

This Preferred Approach does not create any likely significant effects on European sites.

**Fit with WDD Vision**

The waste hierarchy is a key element of the Vision.

**Consultation Responses to WDD: Issues and Options Paper**

The Waste Hierarchy itself was not presented as an issue in the Issues and Options Paper. However, it was described as part of the policy context for preparing a WDD, and its importance referred to in many of the consultation responses on other issues within the Paper.

## Waste Prevention and Re-use

**4.10** Waste prevention and re-use are at the top of the Waste Hierarchy. These principles are fundamental to the WDD as they seek to address our unsustainable consumption of resources.

**4.11** The benefits of waste prevention and re-use are three-fold as they result in:

- a reduction in the use of material resources, water and energy that go into the production of waste in the first instance (be this plastic packaging or food waste);
- a reduction in the resources that are required for management and/or disposal of waste (for waste management infrastructure, water and energy);
- a reduction in what is emitted from these processes (e.g. waste water and greenhouse gases).

**4.12** These benefits are not only good for the environment, they are also financially beneficial. For every tonne of waste that is managed and disposed of there is a financial cost, borne by the government, businesses and individuals.

**4.13** The key objective of the National Waste Strategy for England 2007, is to '*decouple waste growth (in all sectors) from economic growth and put more emphasis on waste prevention and re-use*'. This aim was reflected in the Submitted RSS policy WM1 which stated that '*waste prevention is at the top of the Waste Hierarchy and should therefore be a priority for all partners in waste planning and waste management*'. It recommends actions to deliver waste prevention, including more efficient manufacturing and ordering processes by businesses, encouraging behavioural change to reduce overall consumption and improving home composting, sorting and recycling of waste by public sector bodies. Additional measures could include the requirement for new developments to put in place practicable measures to achieve greater waste minimisation through a waste management audit and strategy. Some of these actions can be encouraged through the WDD, but others need to be addressed through other parts of the Local Development Framework, including Essex District and Borough Councils and Southend-on-Sea Borough Council's Core Strategy policies.

**4.14** While the WDD can only go so far towards achieving waste prevention and re-use in new development, it can support the many waste reduction, education and awareness initiatives that form an integral element of the work the Essex Waste Partnership, and there are a number of partnership waste reduction initiatives in place (such as home composting, real nappy campaigns, scrap and swap-it schemes), described in detail in the Joint Municipal Waste Management Strategy for Essex 2007-2032<sup>(24)</sup> and the Southend-on-Sea Municipal Waste Management Strategy 2004-2020<sup>(25)</sup>.

24 [www.essex.gov.uk/Environment%20Planning/Recycling-Waste/Waste-Strategy/Documents/Waste\\_Strategy\\_-\\_version\\_approved\\_by\\_ECC\\_Full\\_Council\\_on\\_15.07.08.pdf](http://www.essex.gov.uk/Environment%20Planning/Recycling-Waste/Waste-Strategy/Documents/Waste_Strategy_-_version_approved_by_ECC_Full_Council_on_15.07.08.pdf)

25 [www.southend.gov.uk/site/scripts/documents\\_info.php?categoryID=877&documentID=124](http://www.southend.gov.uk/site/scripts/documents_info.php?categoryID=877&documentID=124).

## Preferred Approach 2

### Waste Prevention and Re-use

The WPAs, in partnership with District and Borough Councils, the Environment Agency, industrial and commercial organisations and the voluntary sector, will:

- Promote waste prevention and re-use through raising awareness among the public and business community to encourage behavioural change to reduce overall consumption and encourage home composting, sorting and re-use of waste.
- Support and promote public, private and voluntary sector initiatives to reduce and re-use waste arisings
- Require sustainable construction practices in new waste development that seeks to minimise use of raw materials; maximise opportunities for use of recycled aggregates and re-use or adaptation of existing on-site buildings; reduce, re-use, and recycle wastes generated during construction within development.

#### Reason:

*Waste prevention and re-use is at the top of the waste hierarchy. There is only so much the WPAs can do to encourage or require waste prevention and re-use; namely, seeking to reduce waste arising from construction and demolition of waste-related development. Construction projects worth over £300,000 are legally required to produce a Site Waste Management Plan for the construction phase of the project, which covers waste prevention and reuse.*

*In order to reduce construction and demolition waste further, all types of development proposals should provide information on how wastes will be reduced, re-used or recycled during construction and operation of the premises, at an appropriate level of detail as part of an application. However, this needs to be addressed and promoted through LDF policies within the districts and boroughs of Essex as they make provision for new housing, economic and transport-related development, rather than just waste-related development.*

*Southend-on-Sea's Adopted Core Strategy (Policy KP2: Development Principles) promotes sustainable construction and design practices in all new development proposals, including a reduction in the use of resources, including the use of renewable and recycled resources, and consideration of how the development will provide for the collection of re-usable and recyclable waste.*

*The emerging Essex Minerals DD promotes sustainable construction practices to help implement the first stage of the minerals hierarchy to reduce demand for primary aggregate and to make efficient use of materials.*

### Question 6

Do you agree with the Preferred Approach 2 set out above? Please explain your answer.

## Evidence Base for Preferred Approach 2

The 2010 Capacity Gap Report<sup>(26)</sup> showed that during 2008, a total of nearly 2.0Mt of C&D waste arisings (not including excavation waste) was produced in Essex and Southend, arising from a combination of new build, repair and maintenance and demolition activities. C&D waste is therefore the largest waste stream in the Plan area, and it is important that it is reduced and re-used as much as possible. The WDD can support other national and local initiatives to reduce other waste streams such as municipal, commercial and industrial, but does not have as much influence over these.

### Sustainability Appraisal

There will be significant positive impacts on the sustainable management of waste through the promotion of waste prevention at the top of the hierarchy, and maximising opportunities for re-use and sustainable construction practices in new waste development.

### HRA

This Preferred Approach does not create any likely significant effects on European sites.

### Fit with WDD Vision

Preventing and re-using waste is at the top of the waste hierarchy and foremost in the Vision.

### Consultation Responses to WDD: Issues and Options Paper – Issue 1: Waste Prevention & Re-use

There were mixed responses from consultees regarding what more the WDD could do to promote and enable the prevention and re-use of waste in the Plan area. Some consultees felt that as this is at the top of the waste hierarchy, it should be given more prominence in the WDD and come first in the strategic objectives and order of the document. Others acknowledged that the WDD is unable to influence household, consumer and business behaviour in terms of buying less and a reduction in the amount of packaging etc, but suggested the WDD should refer to all the other initiatives being undertaken by other teams within the Councils. Some consultees also recommended that site waste management plans be required for new waste facilities.

## Spatial Strategy

**4.15** The Spatial Strategy provides a steer to the areas/locations where waste development will be focused throughout the plan period. As described above, the preferred approaches for the Spatial Strategy seek to reflect the priorities of the waste hierarchy and reduction in the transportation of waste.

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26 Note that there are no more recent estimates of C&D waste arisings since that reported in the 2010 Capacity Gap Report.

## The Scale of Waste Management Provision

**4.16** Despite waste prevention and reduction initiatives implemented across the Plan area, the Capacity Gap Reports have shown that in order to meet national policies and waste targets, (for recycling, composting, and recovery of municipal, commercial and industrial, construction and demolition waste, and for diverting waste from landfill), the Waste Planning Authorities will need to make provision for some new waste management facilities during the plan period. These new facilities will address the gap in existing waste management capacity identified for certain waste streams and facility types as outlined in **Chapter 3**. The capacity gap takes into account existing, operational facilities as well as facilities that are not yet operational but where the site has planning permission for proposed waste uses (see Tables 3 and 4 in Chapter 3). These existing operations and permissions form the foundation and evidence base for the development of the spatial strategy.

### Strategic Sites

**4.17** The WDD makes a distinction between strategic and local scale waste management sites and facilities. Strategic waste facilities or sites make a significant contribution to meeting waste management requirements in the Plan area due to their larger size/high tonnage of waste processed, and/or specialist nature of the waste managed. Assumptions about what constitutes a high tonnage for different types of facilities are shown in **Table 8** below. These assumptions take into account the definition of large scale facilities in the Essex and Southend Adopted Waste Local Plan, which was a throughput of at least 50,000 tpa, based upon the thresholds for waste facility planning applications that require Environmental Impact Assessment. Therefore, generally facilities with a throughput greater than 50,000 tpa are considered strategic, with some exceptions where the maximum licensed capacity of existing or permitted facilities in the Plan area demonstrates that 50,000 tpa is not actually a high tonnage for that particular facility type. For example, all four permitted MBT plants in the Plan area are licensed to process 100,000 tpa or greater.

**4.18** Strategic waste facilities and sites already making a significant contribution to current waste management have been safeguarded in Preferred Approach 3, and strategic sites have also been allocated for new waste management uses through Preferred Approaches 4 and 5.

**Table 8 Assumptions for defining strategic waste facilities in the WDD**

<b>Facility Type</b>	<b>What Makes it Strategic?</b>
Transfer stations	Those that support delivery of the Municipal Waste Management Strategies for Essex and Southend-on-Sea.
Clinical / hazardous transfer stations	These facilities deal with specialist types of waste.
Recycling Centres for Household Waste (RCHWs)	While all RCHWs in the Plan area are only licensed to accept a relatively small amount of waste per year (24,999 tpa), all are considered strategic because they support delivery of the MWMS.
Inert waste recycling facilities	Defined as Strategic Aggregate Recycling Sites in the MDD. These sites can process at least 100,000 tonnes of C&D waste per annum.
Materials recovery facilities (MRFs)	Throughput of 50,000 tpa or greater.
Open windrow composting facilities	These are specialist facilities required to be safeguarded
In-vessel composting facilities	These are specialist facilities required to be safeguarded
Mechanical biological treatment facilities (MBT)	Throughput of 100,000 tpa or greater.
Hazardous and WEEE treatment facilities	These facilities deal with specialist types of waste.
Anaerobic digestion facilities (AD)	Throughput of 50,000 tpa or greater.
Autoclave facilities	Throughput of 50,000 tpa or greater.
Combined heat and power facilities (CHP)	Throughput of 100,000 tpa or greater.
Inert landfills	All licensed facilities and those with current planning permission, as capacity required throughout Plan period.
Non-hazardous landfills	All licensed facilities and those with current planning permission, as capacity required until new waste management facilities higher up the hierarchy are developed.
Hazardous waste landfills	These facilities deal with specialist types of waste.
Waste Water Treatment Works	All are required to meet existing population requirements and future planned growth in the Plan area. However, smaller-scale WWTW 'kiosks' are not considered to be strategic.

## Preferred Approach 3

### Overall Spatial Strategy

The Waste Planning Authorities are planning for net self-sufficiency in waste management by 2031, with a year on year reduction in the amount of waste imported from London that is disposed of in the Plan area. Policy WM3 in the Submitted RSS states the maximum quantities of municipal, commercial and industrial waste to be accepted from London by Essex and Southend-on-Sea for landfill is: 256,000 tonnes in 2010/11; 92,000 in 2020/21; 13,000 in 2030/31.

The WPAs will address the waste management capacity requirements for the Plan area set out in Chapter 3 by safeguarding a network of existing, strategic waste management facilities and the three strategic sites with planning permission for Integrated Waste Management Facilities at Stanway (Colchester), Rivenhall (Braintree) and Courtauld Road (Basildon) (see Preferred Approach 4) to support the additional Preferred Site allocations for strategic recycling and recovery facilities to meet the capacity gap through Preferred Approach 5.

These preferred sites have been allocated as they are required to meet the rest of the capacity gap, and have been through a robust site assessment process, SA, SFRA and HRA. These are shown on the Overall Spatial Strategy Map (see Map 2). Should any further sites be required, flexibility is provided through the locational criteria-based Preferred Approaches 6-20 and development management requirements in Preferred Approaches 21-23.

In general, waste proposals (not including landfill / disposal) will be more likely to be supported where they are within existing industrial estates used for general industry (B2), storage and distribution (B8) or land allocated as such in an adopted local plan or LDF document- existing waste management sites or in association with other waste management development.

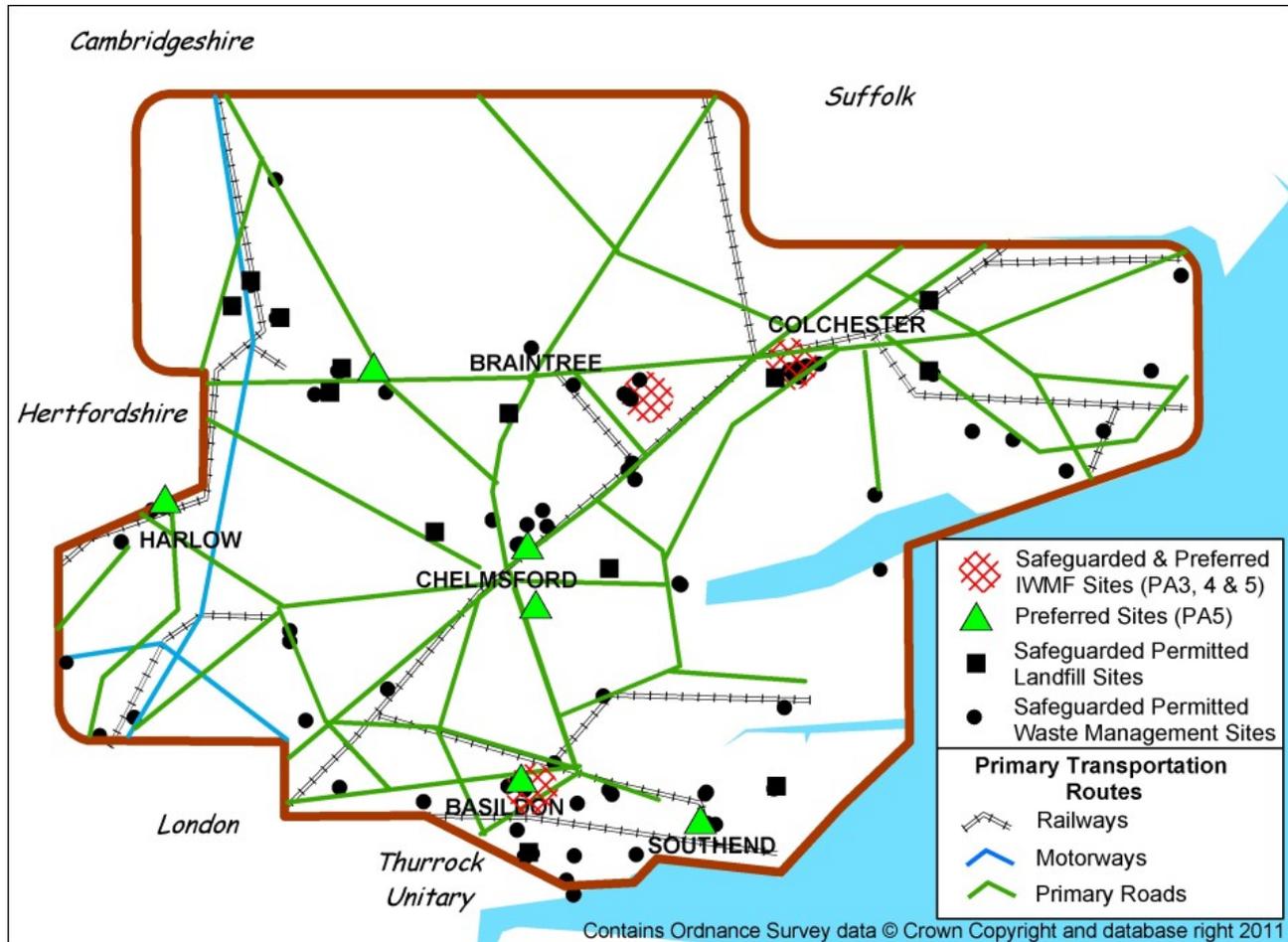
Where proposals for new waste management facilities come forward on non-allocated sites they will need to prove why they are more suitable than the allocated sites to meet the capacity gap, and to meet the relevant locational criteria set out in Preferred Approaches 6-20.

#### Reasons

*A hybrid approach to defining the overall spatial strategy (i.e. allowing a mix of facilities within urban areas but also some smaller settlements and expansion/co-location with existing sites), was favoured by consultees and allows flexibility for the waste industry. The three sites with planning permission for Integrated Waste Management Facilities at Stanway (Colchester), Rivenhall (Braintree) and Courtauld Road (Basildon) have been allocated for safeguarding as they have been demonstrated as suitable sites for waste management through gaining planning permission. Once developed, these sites will make a significant contribution to meeting the capacity gap for municipal, commercial and industrial waste recycling and treatment. Two of the facilities are close to the key urban centres and the*

third is close to one of the smaller centres although centrally located. Therefore, they should be protected from other non-compatible developments by safeguarding the sites for waste management.

**Map 2 Overall Spatial Strategy**



### Question 7

Do you agree with the Preferred Approach 3 set out above, and the Overall Spatial Strategy as shown on Map 2? Please explain your answer.

### Evidence Base

PPS 12 and PPS 10 require development plan documents to make clear spatial choices about where new development should go, in this case, the WDD. The spatial strategy has been influenced by the evidence base with the existence and location of the three integrated waste management facilities, as these have been permitted in accordance with the adopted Waste Plan and will make a significant contribution to moving waste management in the Plan area up the Waste Hierarchy and reducing the amount of waste going to landfill.

## Sustainability Appraisal

There will be significantly positive impacts on the sustainable management of waste through the preferred spatial strategy. The spatial strategy also recognises that further sites may be required, adopting a flexible approach and sets out criteria in relevant Preferred Approaches. Furthermore, the strategy does not restrict new proposals coming forward during the plan period, should they meet the locational criteria of other Preferred Approaches.

### HRA

This Preferred Approach does not have HRA implications as it devolves measures to address new capacity requirements to other PAs. The three strategic sites with planning permission are considered as in combination elements within the screening approach.

### Fit with WDD Vision

The spatial strategy seeks to describe in more detail how new waste management infrastructure will be distributed within the Plan area, which is a key element of the Vision.

## Consultation Responses to WDD: Issues and Options Paper

### Issue 5: How to define the overall spatial strategy (Questions 9 & 10)

Of the 54 respondents to the questions about Issue 5, 40 selected a preferred approach, the majority of which (39%) preferred a hybrid option (e) but cited different combinations of options they would prefer. 29% preferred a decentralised approach (c), 20% preferred focusing on existing key urban centres (b) and 12% preferred expansion and co-location with existing facilities (a). None of the respondents favoured focusing on areas with limited existing capacity (d). The remainder either did not wish to select a preferred approach, or stated in their responses that different combinations of options (a) to (d) would be best (8 respondents), i.e. they preferred a hybrid option (Option e).

### Issue 10: How to define strategic sites (Question 21)

From the 38 respondents who selected one of the options for Issue 10, the three most popular of the five options were Option E (type of facility, selected by nine respondents), then Option B (throughput of facility or size of strategic site at least 100,000tpa, selected by eight respondents), then Option D (location of the site, selected by seven respondents). However, 11 respondents selected the 'other' option, with a wide range of comments supporting this choice.

Additional comments ranged from:

- the location is key (four respondents referred to the proximity principle, i.e. locating facilities as near as possible to waste arisings);
- suggesting that strategic sites should be those that help to deliver the WDD objectives;
- the size/throughput will vary depending on type of facility therefore section criteria are more beneficial;

- a criteria-based approach should be used to define strategic sites;
- agreeing or disagreeing with the 50,000tpa, 100,000 tpa and 3 ha thresholds suggested;
- strategic sites should be identified by site nominees, with respect to WDD objectives;
- no need for strategic sites if a decentralised spatial strategy approach taken.

## Safeguarding Strategic Waste Management Sites

**4.19** Given the variety of development pressures in the Plan area, there is a risk that waste management facilities or sites allocated in the WDD may cease to operate or be subject to a change of use during the Plan period. This could lead to a loss in the overall waste management capacity in the Plan area, including landfill void space, and may result in new or increased capacity gaps forming for some facility types.

**4.20** To avoid the loss of existing strategic facilities, the WPA considers that a number of the operational waste management facilities in the Plan area, as well as sites where planning permission for waste management facilities has been granted, should be protected to ensure that this essential infrastructure meets the waste management needs of the Plan area. These facilities can be protected by *safeguarding* them, which protects the existing or proposed waste facilities from being developed for an alternative, non-waste use. It also ensures that any new development occurring in proximity to the waste sites would not be incompatible with the waste operations. Industrial uses, other waste management or minerals operations would not prejudice waste management uses. However, if land around the waste site was developed for other occupied use, e.g. housing, offices, a school or hospital, the existing waste facility could be perceived as a bad neighbour, and may give rise to complaints from occupants, potentially leading to closure / relocation requirement for an existing facility, or preventing the development of a new facility.

**4.21** Safeguarding is implemented through establishing Waste Consultation Zones around safeguarded sites. Once adopted, the Waste Consultation Areas in the WDD will be included on the Proposals Maps in Local Development Documents of the Essex districts and the unitary authority of Southend-on-Sea Borough Council. The Waste Consultation Zones will trigger consultation by Local Planning Authorities with the Waste Planning Authority when new development proposals come forward on or near safeguarded waste facilities.

**4.22** There is no standard, evidence-based distance to define a Waste Consultation Zone that covers every waste facility type. Public perception and concern about the risk of effects arising from waste facilities (e.g. effects on health from bioaerosols or emissions, or noise, dust and traffic emissions), have led to a commonly-referred to 250 metre suggested buffer distance between waste facilities and sensitive receptors<sup>(27)</sup>. Therefore, Waste Consultation Zones will normally cover and extend for up to 250 metres beyond the boundary of safeguarded sites. However, each site will be considered individually, and if circumstances suggest the depth of the 250 metre zone from the edge of the site should be varied, e.g. due to mitigation measures proposed, then this will be taken into account. The Waste Consultation Zone is designed to inform prospective developers and waste operators of an existing waste management operation or allocation in the WDD and to ensure compatibility of adjacent new development.

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27 Planning for Waste Management Facilities: A Research Study (ODPM, 2004) states for all of the different waste management facility types that where possible, they should be located at least 250 metres from sensitive properties (e.g. houses, business premises).

## Preferred Approach 4

### Safeguarding and Waste Consultation Zones

The WPAs will seek to safeguard a number of strategic sites (as defined in Table 8) in accordance with the life of their planning permission which are all licensed, operating waste facilities; or sites that have planning permission extending beyond the plan period, but are not currently operational; or sites with recent permissions or permissions granted subject to legal agreements; or sites allocated in the WDD through Preferred Approach 5.

#### A. Strategic sites essential for delivery of the WDD

The WPAs will seek to safeguard the strategic sites listed and shown on the map in **Appendix C** for waste management use as they are essential for meeting the waste management requirements in Essex and Southend.

In particular, the three Integrated Waste Management Facilities which have already gained planning permission are safeguarded to ensure they can form part of the existing recycling and recovery capacity for the Plan area, the site boundary and permissions are set out in Appendix E:

- Stanway (Colchester), ESS/63/06/COL (IWMF 1)
- Rivenhall Airfield II (Braintree) ESS/38/06/BTE & ESS/37/08/BTE (IWMF 2)
- Courtauld Road (Basildon) ESS/04/07/BAS (IWMF 3)

#### B. Additional sites essential for delivery of the Joint Municipal Waste Management Strategy (MWMS)

The WPAs will seek to safeguard the additional strategic sites listed and shown on the map in **Appendix C** for waste management use as they are licensed to accept municipal waste and are essential for delivery of the Essex and Southend-on-Sea Municipal Waste Management Strategies.

These sites will be safeguarded for waste uses until such time as the planning permission or waste licence expires, unless it can be demonstrated that the site is no longer required for the delivery of the WDD. As part of the annual monitoring process, the safeguarding of these sites will be reviewed to determine if it is still necessary in terms of meeting the Plan area's capacity requirements, or if a more suitable site has become available (e.g. through planning applications). Any new proposals on the safeguarded strategic sites would have to be of a commensurate scale and demonstrate that the safeguarded facility is no longer required for the delivery of the MWMSs **and** WDD. It would also have to meet the rest of the policies of the WDD.

#### C. Waste Consultation Zones

Within the two tier area of the plan, where planning applications for uses other than waste management activities (excluding minor householder applications) are proposed within or around a 250m consultation zone of the safeguarded sites, the relevant Local Planning

Authority will be required to consult the Waste Planning Authority on the planning application. The application will need to demonstrate that the proposal would not prevent or unreasonably restrict the use of the safeguarded site for waste management purposes.

### Reasons

This policy would not be deliverable if the WPA had to be consulted on every application within or adjacent to the 299 existing waste facilities in the Plan area. There is a high proportion of metal recycling and vehicle dismantling facilities (84), which are not central to delivery of the MWMSs or the WDD and it would not be feasible to safeguard them. The proposed sites to be safeguarded are based on the definition of a strategic site for the WDD (see Table 8).

Safeguarding is required to ensure that existing and allocated sites for waste management facilities are protected from development that could prejudice the waste management operation. Waste Consultation Zones help the WPAs to implement the safeguarding, by informing prospective developers within and around safeguarded sites of the waste management use, so that the compatibility of the proposed new development can be taken into consideration. The safeguarded sites would form part of the LDF and as such a material consideration in determining any planning application within the consultation zone, thereby ensuring that the WDD strategy can be delivered.

### Question 8

Do you agree with the Preferred Approach 4 set out above? Please explain your answer.

### **Evidence Base for Preferred Approach 4**

There are 299 existing waste facilities in Essex and Southend-on-Sea as described in Chapter 3, a number of which are considered to make a strategic contribution to waste management in the Plan area, either due to their larger size, high tonnage of waste processed, and/or specialist nature of the waste managed (see Table 8).

### **Sustainability Appraisal**

The safeguarding and protection of those strategic sites listed in Table 8 will have a significant positive impact on sustainable waste management. Although Waste Consultation Zones do not limit the potential for neighbouring brownfield land to be developed, there may be uncertainty through restrictions for certain development in specific instances.

**HRA**

The Preferred Approach seeks to safeguard existing sites and therefore this aspect does not create issues that require HRA.

The PA defers allocation of further sites to PA5, and although it does seek to safeguard such sites, it does not seek to determine their allocation.

Strategic sites with planning permission, and the potential for non-operational sites becoming operational are considered as 'in combination' elements within the screening approach

**Fit with WDD Vision**

Safeguarding the existing strategic waste management infrastructure in the Plan area is a key element of the Vision.

**Consultation Responses to Issues and Options Paper****Issue 11: Safeguarding existing and allocated waste management sites (Questions 22 & 23)**

Of the 37 respondents on this Issue, 18 specifically agreed with the principle of safeguarding existing waste sites and facilities to ensure no net loss in the existing waste management capacity. Of the four responses who disagreed, were generally on the basis that sites should be in conformity with the WDD, and where sites are incorrectly located or are causing problems, the development of the WDD should be a chance to improve the situation rather than safeguarding all existing facilities as a blanket policy. Of the 22 respondents who expressed preference for one of the safeguarding options A-E, 11 chose option E (other).

**Issue 18: Waste Consultation Zones (Question 30)**

30 out of the 36 respondents expressed a preference for one of the options for Waste Consultation Zones. The majority (16) selected Option 4 from the Issues and Options consultation question (i.e. establish Waste Consultation Zones around all waste management facilities), which is generally consistent with the preferred approach. Comments supporting the choice of Option 4, were mostly in response to a view that all facilities can potentially have an impact on their surroundings, therefore consideration should be given to the protection of all communities and properties (despite the purpose of Waste Consultation Zones being to safeguard the site for the continued operation of the waste facility, not to protect surrounding communities and properties). There was also some support (from 6 respondents) for an approach that would allow for more flexibility, particularly requiring LPAs to designate Waste Consultation Zones through their LDFs, taking local circumstances into account (Option 3).

## 5 RECYCLING AND RECOVERY

**5.1** Following on from waste prevention and re-use, Recycling and Other Recovery are the next tiers in the Waste Hierarchy. By definition in the Waste Framework Directive, Other Recovery includes treatment and energy recovery facilities (see **Figure 2** in **Chapter 2**). This chapter sets out the Preferred Approaches for locating different types of recycling, composting, treatment and recovery facilities, both through identifying preferred sites for allocation in the WDD, as well as locational criteria against which all recycling, composting and recovery proposals will be assessed.

### Recycling facilities

**5.2** The following facility types are considered to contribute to recycling:

- Waste transfer stations and Recycling Centres for Household Waste (enclosed and open-air)
- Materials Recycling Facilities (enclosed and open-air)
- Construction and Demolition (inert) waste recycling facilities (enclosed and open-air)
- Metal recycling and vehicle dismantling facilities (enclosed and open-air)

**5.3** The following facility types are considered to contribute to composting (which is categorised within Recycling in the Waste Hierarchy):

- In-Vessel Composting facilities (enclosed)
- Open windrow composting facilities (outdoor)

### Recovery facilities

**5.4** Recovery in the Waste Hierarchy includes waste treatment processes and waste management techniques that produce fuels, heat and power (i.e. energy recovery), such as:

- Waste water treatment works
- Clinical waste treatment
- Mechanical biological treatment (MBT)
- Anaerobic digestion (AD)
- Autoclaving
- Energy from waste (including Combined Heat and Power plants)
- Pyrolysis and gasification

**5.5** It is noted that Recovery does not include mass burn incineration which is a form of Disposal and is not being promoted in the WDD. Other forms of disposal are discussed in **Chapter 6**.

### Strategic Site Allocations

**5.6** The 2011 Capacity Gap Report outlines that for most types of recycling and recovery facilities, there is currently sufficient capacity within the Plan area to meet future requirements (see **Table 3** in **Chapter 3**). The current capacity estimates include licensed, operational facilities, as well as the capacity that will be provided by the three IWMF sites with planning permission and additional sites with recent permissions or a resolution to approve subject to legal agreements, most recently the Vintner House autoclave facility in Harlow. These sites have demonstrated the real potential to provide waste management capacity in the Plan area as they

have obtained planning permission. Even if these specific planning permissions are not taken up, there is the potential for future waste management planning applications on these sites to come forward and be supported.

**5.7** Given their significant contribution to meeting the capacity requirements for recycling and recovery, the three IWMF sites with planning permission have been safeguarded in Preferred Approach 4. The other recycling or recovery sites with planning permission or approvals subject to legal agreements have also been safeguarded through Preferred Approach 4.

**5.8** Based on assumptions about average facility throughput and land take presented in Table 20 of the 2011 Capacity Gap Report, the indicative numbers of new recycling and recovery facilities that will be required to meet the future capacity gap in the Plan area are set out in **Table 9** below. While the summary of estimated capacity requirements in **Table 6** suggests that only new construction and demolition (or inert) waste recycling facilities will be needed, **Table 9** explains that there may also be a need for additional transfer facilities (in particular for municipal solid waste), as well as new composting facilities.

**Table 9 Indicative numbers of facilities required to address recycling and recovery capacity gaps<sup>(28)</sup>**

Broad Facility Type	Estimated Number of Facilities Required
Transfer	0 However, a minimum surplus may result in the need for an extra 1 or 2 facilities The WDAs have identified a need for 6 MSW transfer facilities to achieve their waste strategy (5 within Essex and 1 in Southend)
Recycling	0
Composting	0 However, it has been identified that there is a significant difference between recycling and composting capabilities. Further large and/or small facilities may be required.
C&D Recycling	6
Treatment	0
Treatment Energy from Waste	0

**5.9** The 2011 Capacity Gap Report shows that under both forecast scenarios, there should be a small surplus of waste transfer capacity at the end of the plan period. However, there are only eight waste transfer stations currently receiving MSW waste and having regard to the

28 Source: Essex County Council (2011) Capacity Gap Report October 2011

Waste Disposal Authorities' requirements, there is an identified need for a network of six new waste transfer stations required early in the Plan period<sup>(29)</sup> required early in the Plan period to support the delivery of the Municipal Waste Management Strategies.

**5.10** Under both forecast scenarios, there is also a surplus in recycling and composting capacity of 1,344 -1,407 ktpa, which indicates there is no requirement to plan for new recycling or composting facilities. However, as noted in **Chapter 3**, ELV and MRS facilities provide nearly half of the recycling capacity, and they do not contribute to recycling of municipal waste. It is therefore anticipated that the combined amount of surplus capacity is lower than that stated but there is still a surplus. In addition, caution should be applied to the surplus having regard to the smaller existing composting capacity of 427 ktpa, it is therefore likely that additional composting capacity will be needed during the Plan period.

**5.11** Therefore, Preferred Approach 5 proposes to allocate a number of sites that would be suitable to accommodate transfer facilities, in-vessel and/or open windrow composting facilities. The proposed allocated sites are the preferred sites that have come through the WDD: Issues and Options Call for Sites and subsequent site assessment process described in **Chapter 8**. It is important to note that the preferred sites may not remain as the preferred sites when the final Submission version of the WDD is prepared. As stated in **Chapter 8**, this is because new information could emerge from this Preferred Approach consultation, which may change the scoring or assessment of the site. Full details of the Preferred Sites are set out in **Appendix E** "Preferred Sites and Non Selected Sites" where comments are invited on the specific sites.

**5.12** Only four sites have been identified as suitable for use as MSW transfer stations, whereas the WDAs have identified a need for six dedicated facilities. It should be noted that two additional MSW Transfer sites needed in proximity to Braintree and Colchester/Tendring. Any additional proposals for transfer stations or in-vessel composting / open windrow composting on non-allocated sites would therefore need to be assessed against the locational criteria in Preferred Approaches 6, 7, 10 and 11.

## Preferred Approach 5

### Strategic Site Allocations for Recycling and Recovery

The following sites shown on **Map 2** and in the Site Schedules in **Appendix E** are Preferred Site allocations to meet future requirements for new transfer capacity (to support increased recycling of MSW) and composting capacity:

**Proposals for MSW transfer stations** on the following sites will be supported provided they are in line with the policies in this WDD:

- **Hoblongs Industrial Estate Gt Dunmow (W9)**
- **Templefields, Harlow (W10)**
- **Springfield Depot, Chelmsford (W11)**
- **Eastern Avenue Depot, Southend-on-Sea (W16)**

29 Five MSW transfer stations will be required in Essex and one in Southend.

It is noted that a further two MSW transfer facilities are required in the vicinity of Braintree and Colchester/Tendring

**Proposals for In-Vessel Composting facilities** on the following sites will be supported provided they are in line with the policies in this WDD:

- **Basildon Waste Water Treatment Works (W3)**
- **Sandon Quarry (W7)**

**Proposed Allocations for Integrated Waste Management Facilities** are on the 3 sites which have already gained planning permission for Integrated Waste Management Facilities and are safeguarded under PA4, to ensure they are able to form part of the existing recovery capacity;

- **Stanway (Colchester), (ESS/63/06/COL) (IWMF1)**
- **Rivenhall Airfield II (Braintree) (ESS/37/08/BTE) (IWMF2)**
- **Courtauld Road (Basildon) (ESS/04/07/BAS) (IWMF3)**

Any proposals for new recycling or recovery facilities which come forward on non-allocated sites would be assessed against the locational criteria in Preferred Approaches 6-15, and be in line with the other policies in this WDD.

In addition, proposals for new strategic recycling or recovery facilities (as defined in **Table 8**) which come forward on non-allocated sites would have to demonstrate that they are more suitable than the allocated sites (with reference to the same site assessment criteria and method used for selecting the allocated sites, see **Chapter 8** and **Appendix D & E**), or that they are replacing an existing safeguarded facility.

#### Reason

*Given their significant contribution to meeting the capacity requirements for recycling and recovery, the three IWMF sites with planning permission have been safeguarded through Preferred Approach 4 as well as allocated to ensure that these sites are used for waste recycling and recovery, along with some other recycling or recovery sites with planning permission or approvals subject to legal agreements. In addition, a small number of MSW transfer stations and composting facilities are needed, which will be strategic sites as they meet the requirements of the WDD. Sufficient sites to meet this need have come through the site assessment process (see **Chapter 8** and **Appendix D & E**) and are preferred for allocation to meet the potential requirement for composting and transfer facilities.*

#### Question 9

Do you agree with the Preferred Approach 5 set out above, and the sites suggested for allocation? Please explain your answer.

*If you would like to make specific comments on the sites please go to **Appendix E Preferred Sites and Non Selected Sites**. (<http://consult.essexcc.gov.uk>)*

## Evidence Base for Preferred Approach 5

The Capacity Gap Report Update 2011 sets out how much capacity is required for recycling and recovery over the Plan period. The three integrated waste management facilities make a significant contribution to providing that capacity and are therefore allocated as strategic sites. Additional appropriate preferred sites for allocation have come through the Call for Sites at the Issues & Options stage, and the sites have been through site assessment process described in **Chapter 8**.

## Sustainability Appraisal

There will be significant positive impacts on sustainable waste management where in addition to the allocation of strategic sites to meet the capacity gap for recycling and recovery in the Plan Area, there is flexibility should new sites come forward and should any existing safeguarded facilities need replacing.

## HRA

The allocation of strategic sites is considered within the Site Schedules (**Appendix E**), which is currently subject to a separate HRA. The PA indicates a need for new compost, waste transfer and inert waste capacity, included within these sites.

The PA seeks to support the uses identified for these sites within the Site Selection process. It does indicate that these uses must be in line with other WDD policies of which PA23 would be of paramount importance in avoiding likely significant effects on European sites.

It is also anticipated that borough LDFs will contain similar environmental protection policies, but these are beyond the scope of this HRA to assess.

Although the PA does not preclude the possibility of non-allocated sites coming forward for waste management it does make it clear that its preferential suitability over the allocated sites would need to be demonstrated. Part of the demonstration required would be compliance with the policy derived from PA23, avoiding impacts on European sites.

Strategic sites with planning permission are considered as 'in combination' elements within the screening approach.

## Fit with WDD Vision

After prevention and re-use, recycling and recovery are the next preferable options for managing waste and diverting it from landfill, and this is a key element of the Vision, as is the delivery and continued operation of the three integrated waste management facility sites.

## Consultation Responses to WDD: Issues and Options Paper (October 2010)

Strategic sites were not identified in the Issues and Options Paper 2010. However, it did include a Call for Sites (Issue 27), and a number of potential sites were put forward by landowners, developers and the waste industry.

## General Locational Criteria For Recycling And Recovery Facilities

**5.13** In order to provide flexibility over the Plan period and to encourage even higher rates of recycling, composting and recovery, the following Preferred Approaches provide more guidance as to what criteria proposals for different recycling and recovery facilities will be assessed against, whether on safeguarded, allocated or non-allocated sites.

### Preferred Approach 6

#### General Locational Criteria for Recycling and Recovery Facilities

Proposals for new waste management facilities (excluding landfill and low level radioactive waste management, which are covered in Preferred Approaches 16-20) outside the allocated and safeguarded sites in the WDD will be supported at the following locations, provided they are in accordance with all other policies in the WDD:

- within existing industrial estates used for general industry (B2), storage and distribution (B8) or land allocated as such in an adopted local plan or LDF document
- within existing waste management sites or in association with other waste management development
- within those employment areas (existing or allocated) not categorised by Use Class B2 or B8,
- within areas of degraded, contaminated or derelict land

In addition, new strategic recycling or recovery facilities (as defined in Table 8) which come forward on non-allocated sites would have to demonstrate that they do not undermine the provision of waste development on strategic safeguarded and allocated sites.

#### Reason

*A number of recycling and recovery facilities have similar locational requirements. Consultees supported most of the suggested locations for the different types of recycling and recovery facilities in the Issues and Options Paper. Policy W8B in the Essex and Southend-on-Sea Adopted Waste Local Plan sets out similar general locational criteria, and during the monitoring period 1<sup>st</sup> April 2009 to 31<sup>st</sup> March 2010 was one of the five most frequently referred to WLP policies when making planning application decisions<sup>(30)</sup>*

Question 10 is associated with Preferred Approaches 6 – 11 and is set out below Preferred Approach 11.

30 *Minerals and Waste Annual Monitoring Report. 1st April 2009 - 31st March 2010. Essex County Council, December 2010.*

## Evidence Base for Preferred Approach 6

In identifying *where* waste is to be managed and disposed of, PPS10 identifies the key opportunities as:

- On-site management of waste where it arises;
- A broad range of locations, including industrial sites, brownfield land, and looking for opportunities to co-locate facilities together and with complementary activities, reflecting the concept of resource recovery parks.

In addition, the physical and environmental constraints on development set out in Annex E of PPS10, including existing and proposed neighbouring land uses, also need to be taken into account when assessing suitability of sites for waste management facilities.

### Fit with WDD Vision

Encouraging development of recycling and recovery facilities fits well with the vision to manage more waste higher up the waste hierarchy.

### Consultation Responses to WDD: Issues and Options Paper

#### Issues 6-8: Locational Criteria for Recycling and Composting Facilities, Treatment Facilities and Recovery Facilities

The Overview Workshop Report on the Joint WDD: Issues and Options Consultation showed that the principal public concerns in relation to the location of materials recycling and composting facilities are traffic and transport issues, with these being seen as both the greatest advantage and disadvantage of locating such facilities close to waste arisings.

There was considerable spread in the consultation responses received in relation to the locational criteria for recycling, composting, treatment and recovery facilities. The most popular options for the locations of different scale facilities are shown in the Evidence Base boxes below Preferred Approaches 7-11.

### Sustainability Appraisal

There will be significant positive impacts regarding the sustainable use of land and sustainable waste management as well as sustainable transport arrangements in reducing transportation distances. Uncertainty surrounds issues of air quality and public nuisance. Although neither issue need be included in this Preferred Approach, any potential negative impacts are neutralised by the criteria set out in Preferred Approach 23.

### HRA

The PA indicates that facilities will need to be in accordance with other policies within the WDD, of which PA23 would be of paramount importance in avoiding likely significant effects on European sites, since it specifically advises that *'Waste management development proposals will be acceptable... provided satisfactory provision is made to avoid unacceptable impacts and maximise opportunities in respect of the following ... biodiversity within the*

*Plan area (including internationally, nationally and locally designated sites... In particular, proposals should avoid ... disturbance or harm to species, as a result of noise, visual impacts (including light pollution) dust or vibration'.*

The policies within the WDD will ensure that no significant adverse effects can arise as a result of this Preferred Approach.

## Recycling

**5.14** As part of the overall strategy to move waste management higher up the Waste Hierarchy, facilities are required for the sorting, separation, bulking up and onward transportation of the various elements of the waste stream. Such facilities allow for the recovery of materials from the waste stream for re-use, recycling, bio-degradation or energy from waste.

### Waste Transfer Stations

**5.15** Waste transfer stations are facilities where solid waste materials are transferred from small vehicles to large trucks to be bulked up for efficient transport to recycling, treatment, recovery or disposal sites over a large distance. Facilities tend to be located in industrial areas close to the source of the waste and then bulked up for onward distribution. The majority of the 110 waste transfer stations in the Plan area are for commercial and industrial waste, and commonly receive skip/lorry loads of waste from the business sector. The waste is mainly inert and can include Waste Electrical and Electronic Equipment (WEEE). Waste transfer stations have increasingly included a proportion of waste recycling (assumed to be 10% of the sites capacity in the 2011 Capacity Gap Report) to sort and separate out metals, wood etc to be distributed for re-use/recycling whilst the residual mixed waste is sent to landfill. The most commonly recognisable type of waste transfer facility to members of the public is a Recycling Centre for Household Waste (RCHW) which also includes sorting and separation e.g. green waste and cardboard.

**5.16** The Capacity Gap Report Update 2011, states that the Waste Disposal Authority has identified a requirement for a network of 6 waste transfer stations for the delivery of the Municipal Waste Management Strategy. Four potential sites have been assessed within the site selection process described in **Chapter 8** and **Appendix D & E**. Two additional sites are required in the districts of Braintree and Colchester or Tendring. Please refer to Preferred Approach 5 above for MSW transfer stations.

### Key Characteristics

**5.17** Waste transfer stations usually consist of a building on a site of up to 1 hectare in size which can be enclosed (within a building – similar to industrial warehouses) or in the open air. Transfer stations are often located with other waste management facilities such as Materials Recycling Facilities (see separate description below) to sort and separate recyclables from the waste on-site. Once sorted the waste is transferred on for either recycling/re-processing or disposal. If the waste has been sorted it may be stored overnight. Waste transfer stations are often served by a large number of Heavy Goods Vehicles (HGVs), which can impact on road congestion and air quality. Transfer stations do however reduce the total number of HGVs on the roads which in turn reduces congestion levels and the total number of pollutants that would otherwise be produced. Generally, issues with vermin, litter, and water pollution are less likely

to occur with enclosed processes, but could present more of a problem with open air facilities if poorly managed. The rapid turnaround of waste on site usually prevents any serious odour problems, but air filtration can be used to reduce odours in enclosed facilities. Vehicular movements and mechanical operations may increase noise levels in the vicinity of the site.

### **Materials Recovery/Recycling Facilities (MRFs)**

**5.18** Material Recovery Facilities (MRFs) not only facilitate the recovery of materials for recycling but also separation of the organic fraction for biological degradation. Waste is mainly inert or non-hazardous (from households (MSW) and businesses (C&I)) such as plastics and paper. The separated unusable wastes can then be bulked up for recovery / energy from waste or landfill. Pre-processing can also serve to increase the overall calorific content of wastes destined for energy from waste recovery by removing the non-, or poorly combustible elements to produce a Refuse Derived Fuel.

### **Key Characteristics**

**5.19** MRFs can be either enclosed or in the open air and normally require a site of between 1-3ha in size. Enclosed facilities are similar to industrial warehouses in appearance and size so their siting can be compatible with a range of land uses, particularly existing industrial land and mixed use developments. Generally, issues with vermin, litter and water pollution are less likely to occur with enclosed processes, but can present more of a problem with open air facilities if poorly managed. Odour is not usually associated with enclosed or open air MRFs as the majority of the waste is dry recycle.

**5.20** MRFs typically have a minimal impact on air emissions and those that do arise are primarily associated with traffic. Traffic movements may often increase in the locality of an MRF, as they are located on industrial areas close to sources of arisings, and markets for recyclable materials that are separated and bulked up in the MRFs for onward distribution. Vehicular movements and mechanical operations may also increase noise levels.

## **Preferred Approach 7**

### **Locational criteria for Materials Recycling/ Recovery Facilities and Waste Transfer Stations**

Proposals for new Materials Recovery Facilities, Recycling Centres for Household Waste, bulking-up facilities and waste transfer stations will be supported at the following locations, provided they are in accordance with all other relevant policies in the WDD:

- for MSW transfer only (refer to Preferred Approach 5 MSW transfer allocations);
- within existing industrial estates used for general industry (B2), storage and distribution (B8) or land allocated as such in an adopted local plan or LDF document;
- within existing waste management sites or in association with other waste management development;
- within those employment areas (existing or allocated) not categorised by Use Class B2 or B8;

- within areas of degraded, contaminated or derelict land;
- small scale facilities (i.e. not meeting the definition of strategic in Table 8) may be accommodated at current landfill sites, provided they do not prejudice the agreed restoration timescale for the site and the new use ceases prior to the permitted completion date of the site.

In addition, proposals for new strategic MRFs, RCHWs and waste transfer stations (as defined in **Table 8**) which come forward on non-allocated sites would have to demonstrate that they do not undermine the provision of waste development on strategic safeguarded and allocated sites.

### Reason

*MRFs and Waste Transfer Facilities have similar locational requirements. Consultees supported most of the suggested locations for the different types of recycling and recovery facilities in the Issues and Options Paper, but the exclusion of some types of locations takes into account the level of support given to the different locations in consultation responses. Some locations received low support for particular facilities, generated negative scores in the SA and are considered not suitable to easily accommodate those facilities without potentially impacting neighbouring uses and environmental features of those locations.*

## **Evidence Base for Preferred Approach 7**

In identifying *where* waste is to be managed and disposed of, PPS10 identifies the key opportunities as:

- On-site management of waste where it arises;
- A broad range of locations, including industrial sites, brownfield land, opportunities for co-location of facilities together and with complementary activities, reflecting the concept of resource recovery parks.

In addition, the physical and environmental constraints on development set out in Annex E of PPS10, including existing and proposed neighbouring land uses, also need to be taken into account when assessing suitability of sites for waste management facilities.

### **Sustainability Appraisal**

There will be significant positive impacts on the sustainable use of land and sustainable waste management. Uncertainty surrounds issues of air quality and public nuisance, although neither issue need be included in this Preferred Approach, any potential negative impacts are neutralised by the criteria of Preferred Approach 23.

The assumption is that no new WwTW sites will be required and that any new facilities would need to meet the requirements of the Water Framework Directive.

## HRA

The PA indicates that facilities will need to be in accordance with other policies within the WDD, of which PA23 would be of paramount importance in avoiding likely significant effects on European sites.

The policies within the WDD will ensure that no significant adverse effects can arise as a result of this Preferred Approach.

### Fit with WDD Vision

Encouraging development of recycling facilities fits well with the vision to manage more waste higher up the waste hierarchy, and that the new integrated waste facilities will be supported by a network of transfer, recycling and composting facilities.

### Consultation Responses to WDD: Issues and Options Paper – Issue 6: Locational Criteria for Recycling and Composting Facilities

The Overview Report on the WDD: Issues and Options Consultation Workshops showed that the principle public concerns in relation to the location of MRFs are traffic and transport issues, with these being seen as both the greatest advantage and disadvantage of locating such facilities close to waste arisings.

There was considerable spread in the consultation responses received in relation to the locational criteria for recycling facilities. The WDD: Issues and Options included options for the locations of different scale facilities (large and small but the size of was not defined). The most popular locations with consultees are shown below:

#### Waste Transfer Stations (enclosed)

Large-scale - industrial estates close to waste arisings where they are used for general industry, storage and distribution.

Small-scale - co-location with existing waste facilities.

#### Waste Transfer Stations (open air)

Both large and small-scale - co-location with existing waste facilities.

#### Materials Recycling Facilities (enclosed)

Both large and small-scale - industrial estates used for general industry, storage and distribution.

#### Materials Recycling Facilities (open air)

Large-scale - industrial estates close to waste arisings and used for general industry, storage and distribution.

Small-scale - even split between industrial estates close to waste arisings and used for general industry, storage and distribution and co-location with existing waste facilities.

## Inert Waste Recycling

**5.21** Inert waste recycling concerns recycling of construction and demolition waste and is also referred to as construction and demolition (C&D) recycling. Waste from C&D activities is mainly inert and is typically made up of non-contaminated soil, rubble, bricks and tiles. It can also contain non-inert waste such as wood and soil that contains vegetation or has become mixed together. C&D recycling facilities screen and separate the materials: rubble can be crushed and re-used in construction projects and other suitable materials (eg bricks) are recovered for re-use as sites are dismantled. Any mixed waste would be removed from the process for treatment.

**5.22** There are various types of existing of C&D recycling sites, including temporary 'on site' at the redevelopment sites, existing minerals and waste sites and a few permanent/long-term strategic aggregate recycling sites. The majority of the existing sites are temporary on minerals workings and landfill sites. The emerging Minerals DD: Preferred Approach (2010) explores the potential to upgrade and improve the quality of C&D recycling, to promote the use of secondary and recycled aggregate, as these make a valuable contribution as alternatives to primary aggregates.

**5.23** As explained in **Chapter 3**, there will be a capacity deficit from 2020/21, reaching 511 ktpa by 2031, in part due to closure of temporary facilities located at mineral workings and landfill sites as operations cease and the sites are restored.

**5.24** It is anticipated that most of the inert waste recycling capacity required is likely to continue to be provided by temporary facilities at mineral workings and landfill sites. It is noted that the majority of inert and non-hazardous landfill sites proposed by landowners and operators during the Issues and Options Call for Sites included proposals for aggregate recycling (see **Chapter 8** and **Appendix E**). The Minerals Preferred Approach (2010) included an Area of Search for a permanent Strategic Aggregate Recycling Site in the west of the County in/or around Harlow, which could provide at least 100,000 tonnes/year. Therefore, it is not necessary to allocate further sites for permanent inert waste recycling facilities in the WDD, but proposals for temporary and any further permanent inert recycling facilities will be assessed against the locational criteria provided in Preferred Approach 8.

### Key Characteristics

**5.25** The recycling of C&D waste can occur at temporary facilities on or adjacent to a site during the demolition/construction phase of a development or removed from the re-development site to off-site facilities which can re-use or recycle materials. Off-site facilities are often co-located with other waste management facilities, mineral sites or within existing industrial sites. On-site temporary facilities (at the re-development site) reduce the need for materials to be transported, reducing traffic and air quality impacts, and can allow for recycled materials to be re-used directly in new development where appropriate. Locations at mineral workings and landfill sites offer the benefit of 'last chance' recycling of aggregates and potential to promote the sale of recycled aggregate.

**5.26** Due to the mainly inert nature of the waste, odour and vermin are not normally an issue at C&D recycling facilities but vehicular movements and mechanical operations may increase noise levels in the vicinity of the site. Dust can also be created at C&D recycling facilities.

## Preferred Approach 8

### Locational criteria for Inert Waste Recycling Facilities

Proposals for new inert waste recycling facilities will be supported at the following locations, provided they are in accordance with all other relevant policies in the WDD.

- within the IMWF sites safeguarded and allocated in Preferred Approaches 4 & 5;
- within existing industrial estates used for general industry (B2), storage and distribution (B8) or land allocated as such in an adopted local plan or LDF document;
- within existing waste management sites or in association with other waste management development;
- within areas of degraded, contaminated or derelict land;
- at current mineral working and landfill sites, provided they do not prejudice the agreed restoration timescale for the site and the new use ceases prior to the permitted completion date of the site;
- at demolition and construction sites where the inert waste materials are to be used in the construction project on that site.

In addition, proposals for new strategic inert waste recycling facilities (as defined in Table 8) which come forward on non-allocated sites would have to demonstrate that they do not undermine the provision of waste development on strategic safeguarded and allocated sites.

#### Reason

*Inert waste recycling facilities can be temporary, such as mobile crushing plants that are frequently used on large demolition sites, where materials are recycled for use in the redevelopment of the site or sold and taken directly to another project. However, recycling to produce a graded aggregate substitute requires a much more sophisticated crushing plant than mobile plants can offer. Consequently a large volume of input material is required to justify the additional capital expenditure. Fixed sites are therefore also required so that material from a range of sources can be drawn upon. Due to their industrial nature, aggregate recycling centres are best located on industrial estates.*

## Evidence Base for Preferred Approach 8

As regards to *where* waste is to be managed and disposed of, PPS10 identifies the key opportunities as:

- On-site management of waste where it arises;
- A broad range of locations, including industrial sites, brownfield land, and identifying opportunities to co-locate facilities together and with complementary activities, reflecting the concept of resource recovery parks.

In addition, the physical and environmental constraints on development set out in Annex E of PPS10, including existing and proposed neighbouring land uses, also need to be taken into account when assessing suitability of sites for waste management facilities.

### Fit with WDD Vision

Encouraging development of inert waste recycling facilities fits well with the vision to manage more waste higher up the waste hierarchy, encourage the re-use of construction and demolition waste, and that the new integrated waste facilities will be supported by a network of transfer, recycling and composting facilities.

### Consultation Responses to WDD: Issues and Options Paper – Issue 6: Locational Criteria for Recycling and Composting Facilities

There was considerable spread in the consultation responses received in relation to the locational criteria for C&D recycling facilities. The most popular options for the locations of different scale facilities are shown below:

#### Construction and Demolition Recycling Facilities

On development sites on a temporary basis followed closely by co-location with existing waste facilities.

### Sustainability Appraisal

There will be significant positive impacts on the sustainable use of land, sustainable waste management, sustainable transport and additionally air quality in the short-medium term where temporary facilities will be located at current mineral working and landfill sites and at demolition and construction sites, removing the need for any waste transportation and associated vehicle emissions. Permanent sites will have uncertain impacts on air quality dependant on specific proposals.

### HRA

The PA indicates that facilities will need to be in accordance with other policies within the WDD, of which PA23 would be of paramount importance in avoiding likely significant effects on European sites.

The policies within the WDD will ensure that no significant adverse effects can arise as a result of this Preferred Approach.

## Metal Recycling And Vehicle Dismantling Facilities

**5.27** Metal Recycling Sites (MRS or scrap yards) are essentially material recycling / waste transfer stations dedicated to recovery and bulking up of metals providing a high quality feedstock to the smelting industry. There is already a well-established infrastructure for recovering metals, with scrap metal yards collecting and supplying main dealers. There are three principal sources of scrap metal: wastes from industrial and manufacturing processes such as off-cuts and stampings; scrap and obsolete plant including ships, railway equipment and vehicles; and light scrap from post-consumer goods.

**5.28** Vehicle breakers yards (End of Life Vehicle centres – ELVs) have traditionally been unsightly open air facilities, subject to few environmental controls. More recently, with greater environmental controls being imposed on scrap yards together with changes in vehicle design, there is greater recovery of all component parts, so more sophisticated vehicle dismantling facilities have been established. These more modern facilities sometimes called vehicle de-pollution facilities require buildings/ workshops to strip the vehicles of various components and to recover oils and liquids; as well as storage space in addition to metal processing and sorting equipment.

### Preferred Approach 9

#### Locational criteria for Metal Recycling and Vehicle Dismantling Facilities

Proposals for new metal recycling and vehicle dismantling facilities will only be supported at the following locations, where they do not undermine the provision of waste development on strategic safeguarded and allocated sites and are in accordance with all other relevant policies in the WDD:

- within existing industrial estates used for general industry (B2), storage and distribution (B8) or land allocated as such in an adopted local plan or LDF document;
- within existing waste management sites or in association with other waste management development;
- within areas of degraded, contaminated or derelict land.

#### Reason

*Metal recycling and vehicle dismantling sites are similar to other industrial developments, but can be noisy and sometimes unsightly, therefore they need to be carefully sited within industrial areas.*

## Evidence Base for Preferred Approach 9

In identifying *where* waste is to be managed and disposed of, PPS10 identifies the key opportunities as:

- On-site management of waste where it arises;
- A broad range of locations, including industrial sites, brownfield land, and identifying opportunities to co-locate facilities together and with complementary activities, reflecting the concept of resource recovery parks.

In addition, the physical and environmental constraints on development set out in Annex E of PPS10, including existing and proposed neighbouring land uses, also need to be taken into account when assessing suitability of sites for waste management facilities.

### Fit with WDD Vision

Allowing development of metal recycling and vehicle dismantling facilities within industrial areas only, fits well with the vision to minimise potential adverse impacts on the general amenity of local communities, on the natural environment and the landscape and townscape of Essex and Southend.

### Consultation Responses to WDD: Issues and Options Paper

Metal recycling and vehicle dismantling facilities were not explicitly covered in the WDD: Issues and Options Paper, although they are assumed to be comparable to Material Recycling Facilities & Waste Transfer Stations, and are therefore covered within Issue 6 as discussed above.

### Sustainability Appraisal

There will be significant positive impacts regarding the sustainable use of land and sustainable waste management. Uncertainty exists regarding impacts on air quality dependant on specific proposals.

### HRA

The PA indicates that facilities will need to be in accordance with other policies within the WDD, of which PA23 would be of paramount importance in avoiding likely significant effects on European sites.

The policies within the WDD will ensure that no significant adverse effects can arise as a result of this Preferred Approach.

## Composting (In-Vessel And Open Windrow)

**5.29** The Capacity Gap Reports have concluded that additional composting facilities are likely to be required to treat organic waste. Two suitable sites have been proposed for allocation in Preferred Approach 5. Composting is a suitable treatment for agricultural wastes, sewage sludge and the putrescible organic fraction of MSW, mainly sourced via dedicated green waste kerbside

collection or at RCHWs. Equally C&I sources could include agriculture and landscape/ gardening businesses. The compost material produced needs to be of high quality to be sold through horticultural and retail markets.

**5.30** In both composting processes (in-vessel and open air) micro-organisms break down biodegradable waste using oxygen, leaving a residue (compost), water and carbon dioxide. Waste is shredded into fine particles before being piled into long rows (windrows). Air is allowed to pass over the waste, often fan assisted (within in-vessel systems) and, using mechanical devices to turn the waste periodically, cause it to decompose. In-vessel composting is carried out undercover within a controlled environment to control temperature, moisture, water and oxygen and odour management thereby speeding up the compost process, whereas open windrow is a more traditional open air process.

### **Key Characteristics**

**5.31** Traditional open windrow composting plants can be located in rural areas, due primarily to their low profile structures and their similarity to other agricultural practices. Whilst buildings are not normally required for open air composting facilities there would usually be an associated office and weighbridge on site, along with the shredder and other associated equipment. In general therefore, these facilities can be sited at temporary sites, such as landfill facilities if managed properly without disrupting the restoration of the site. This will be of advantage in seeking to meet more stringent targets for reducing the amount of biodegradable waste going to landfill. Enclosed, in-vessel composting facilities often require a large waste reception building to receive the waste for sorting and shredding prior to being transferred to the low level in-vessel structures. In-vessel composting facilities can also be similar to agricultural buildings and accommodated in rural areas or on landfill sites, but may also be suited to areas allocated for business use and commercial industrial areas.

**5.32** The greatest potential for odour production is when biodegradable waste starts to break down. This concerns both open and enclosed windrows. However the management controls within in-vessel composting enable air filtration to reduce odours to a minimum. Vermin and problems with water pollution can also occur at open windrow sites if poorly managed but are less common at in-vessel facilities. Litter is not usually a problem at composting sites.

## Preferred Approach 10

### Locational criteria for In-vessel Composting Facilities

Proposals for new in-vessel composting facilities will be supported at the following locations, where they are in accordance with all other relevant policies in the WDD:

- within the sites allocated for In-vessel composting and the IWMF safeguarded & allocated in Preferred Approach 4 & 5;
- within existing industrial estates used for general industry (B2), storage and distribution (B8) or land allocated as such in an adopted local plan or LDF document;
- within existing waste management sites or in association with other waste management development including Waste Water Treatment Works;
- on existing areas of hardstanding and/or degraded, contaminated or derelict land and previously developed land in rural areas;
- within redundant farm land and buildings.

In addition, proposals for new strategic in-vessel composting facilities (as defined in Table 8) which come forward on non-allocated sites would have to demonstrate that they do not undermine the provision of waste development on strategic safeguarded and allocated sites.

#### Reason

*In-vessel composting facilities include a waste reception building similar to a warehouse where waste is deposited for sorting and shredding prior to being transferred to the low level in-vessel structures and may have the potential to be located within industrial and employment areas. Consultees supported most of the suggested locations for in-vessel composting facilities in the Issues and Options Paper, but some locations received lower support or generated negative scores in the SA (e.g. open countryside) and are considered not suitable to easily accommodate those facilities without potentially impacting neighbouring uses and environmental features of those locations.*

## Preferred Approach 11

### Locational criteria for Open Windrow Composting Facilities

Proposals for new outdoor composting facilities will be supported at the following locations within the rural area, where they are in accordance with all other relevant policies in the WDD:

- on existing areas of hardstanding and/or degraded, contaminated or derelict land and previously developed land in rural areas;
- within redundant farm land and buildings;
- in association with other waste management development, including Waste Water Treatment Works;
- where the compost is to be used as part of the restoration requirement for a mineral working and/or a reclamation process on adjoining land;
- at landfill sites where the compost is to be used as part of the restoration and the residual waste can be disposed of, provided the new use ceases prior to the permitted completion date of the site.

In addition, proposals for new strategic open windrow composting facilities (as defined in **Table 8**) which come forward on non-allocated sites would have to demonstrate that they do not undermine the provision of waste development on strategic safeguarded and allocated sites.

#### Reason

*Open windrow composting facilities are most suitable in rural locations due to their similarity with other rural developments (e.g. farms). However, they can produce odours because of the biodegrading process and being outdoors. Therefore, rural locations are supported, but particular requirements for minimising potential adverse effects on residential amenity and rural character are identified in the Preferred Approach. Consultees supported most of the suggested locations for outdoor composting facilities in the Issues and Options Paper, but some locations received lower support or generated negative scores in the SA and are considered not suitable to easily accommodate those facilities without potentially impacting neighbouring uses and environmental features of those locations.*

## Evidence Base for Preferred Approaches 10 and 11

In identifying *where* waste is to be managed and disposed of, PPS10 identifies the key opportunities as:

- On-site management of waste where it arises;
- A broad range of locations, including industrial sites, brownfield land, and identifying opportunities to co-locate facilities together and with complementary activities, reflecting the concept of resource recovery parks.

In addition, the physical and environmental constraints on development set out in Annex E of PPS10, including existing and proposed neighbouring land uses, also need to be taken into account when assessing suitability of sites for waste management facilities.

### Fit with WDD Vision

Encouraging development of composting facilities fits well with the vision to manage more waste higher up the waste hierarchy, and that new integrated waste facilities will be supported by a network of transfer, recycling and composting facilities.

### Consultation Responses to WDD: Issues and Options Paper – Issue 6: Locational Criteria for Recycling and Composting Facilities

The Overview Workshop Report on the WDD: Issues and Options Consultation showed that transport issues were seen as the most significant advantage of locating composting facilities close to the source of arisings, although a significant proportion of people expressed concerns about the impacts relating to odour and pollution associated with windrow facilities.

There was considerable spread in the consultation responses received in relation to the locational criteria for composting facilities. The most popular options for the locations of different scale facilities are shown below:

#### In-Vessel Composting

Both large and small-scale - co-location with existing waste facilities.

#### Open Windrow Composting –

Small-scale - redundant farm buildings.

Large-scale - working relationship with mineral working and landfill sites.

### Sustainability Appraisal

#### PA10

There will be significant positive impacts regarding the sustainable use of land and sustainable waste management. Uncertainty exists regarding impacts on air quality dependant on specific proposals.

#### **HRA**

The PA indicates that facilities will need to be in accordance with other policies within the WDD, of which PA23 would be of paramount importance in avoiding likely significant effects on European sites.

The policies within the WDD will ensure that no significant adverse effects can arise as a result of this Preferred Approach.

#### PA11

There will be significant positive impacts regarding the sustainable use of land and sustainable waste management. Uncertainty exists regarding potential impacts on undesignated biodiversity value, the specific conditions regarding the historic environment in proposals, sustainable transport arrangements in rural areas and impacts on public nuisance and access; however these potential negative impacts are neutralised through preferred Approaches 23 and 21.

#### **HRA**

The PA indicates that facilities will need to be in accordance with other policies within the WDD, of which PA23 would be of paramount importance in avoiding likely significant effects on European sites.

The policies within the WDD will ensure that no significant adverse effects can arise as a result of this Preferred Approach.

### Question 10

**Do you agree with Preferred Approaches 6-11 set out above? Please explain your answer.**

## Recovery (Including Treatment And Energy From Waste)

**5.33** The purpose of waste treatment is a method of waste management to reduce the volume of residual waste for disposal and to produce a more stable product, which has less of an impact on the environment, i.e. involves changing the nature of the material and making it more manageable for disposal.

### Waste Water Treatment Works

**5.34** A study was undertaken to determine any need for additional waste water treatment works (WWTWs) in the Plan area<sup>(31)</sup> **Broken link - possible circular reference**. Amongst other evidence, this study considered Water Cycle Strategies that have commenced in the Plan area and investment plans of the sewerage undertakers – Anglian Water Services (AWS) Limited and Thames Water Utilities (TWU) Limited. Consideration was given to the demands resulting from population growth and any reductions in water use over time.

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31 [Background Paper Waste Water Treatment](#), Essex and Southend-on-Sea Waste Local Development Framework. Clover Planning, June 2010

**5.35** Additional waste water treatment capacity needs to be provided. The sewerage undertakers have indicated that this capacity can be met through upgrades to existing works, rather than any requirement for new plants. Therefore, existing waste water treatment works have been safeguarded under Preferred Approach 4, and are shown in **Appendix C**. However, there may be circumstances where the location of new population growth makes it more cost effective to provide new works. AWS considers there will also be a need to increase the capacity for sludge treatment to cater for an increased population whilst both sewerage undertakers envisage the need for ongoing investment in facilities to improve product quality.

## Preferred Approach 12

### Locational criteria for Waste Water Treatment Works

New or extended waste water treatment facilities, including sludge treatment, may be located in the following locations where they are in accordance with all other relevant policies in the WDD:

- within existing Waste Water Treatment Works;
- within industrial estates used for general industry (B2), storage and distribution (B8) or land allocated as such in an adopted local plan or LDF document;
- within existing waste management sites or in association with other waste management development;
- on existing areas of hardstanding and/or degraded, contaminated or derelict land and previously developed land in rural areas;
- within redundant farm land and buildings.

In addition, proposals for new strategic Waste Water Treatment Works (as defined in **Table 8**) which come forward on non-allocated sites would have to demonstrate that they do not undermine the provision of waste development on strategic safeguarded and allocated sites.

WWTW proposals would also need to:

- make adequate provision for odour control to ensure no unacceptable impact on residential amenity;
- have suitable highways access to ensure no unacceptable impact on highways, and;
- aim to improve the quality of discharged water or reduce the environmental impact of operation, subject to access to a suitable water course for discharge of treated water. The receiving environment of additional flows must be able to meet water quality requirements in accordance with the European Water Framework Directive.

Provision for recycling of sludge to produce beneficial end products will be encouraged, as would co-treatment of sludge with other wastes e.g. through anaerobic digestion.

### Reason

*Whilst additional WWTW capacity will be required over the plan period, it is anticipated that this can be met through upgrades to existing works, rather than any requirement for new plants. Therefore, a criteria approach is preferred as no new sites need to be allocated. Consultees supported the proposed criteria included in the Issues and Options Paper, but suggested some revisions to the criteria relating to receiving water and residential amenity, which have been incorporated. Some of the criteria originally proposed have been taken out as they are covered by other Preferred Approaches in the WDD (flood risk, primary road network).*

### Question 11

Do you agree with the Preferred Approach 12 set out above? Please explain your answer.

### **Evidence Base for Preferred Approach 12**

The Background Paper (Waste Water Treatment, Essex and Southend-on-Sea Waste Local Development Framework. Clover Planning, June 2010), shows that additional waste water treatment capacity needs to be provided, but that this could be done through upgrades to existing facilities.

### **Fit with WDD Vision**

Encouraging development of waste water treatment works fits well with the vision to manage more waste higher up the waste hierarchy, and to meet the growth planned for Essex and Southend.

### **Consultation Responses to WDD: Issues and Options Paper – Issue 15: Waste Water Treatment (Question 27)**

23 consultees responded to Issue 15 (Waste Water Treatment), the majority (16) agreeing with the suggested policy criteria for waste water treatment, and only 3 disagreeing. Where they disagreed, this was generally because they sought an amendment to one or more of the criteria (and these have now been incorporated in the Preferred Approach above).

### **Sustainability Appraisal**

There will be significant positive impacts on the sustainable use of land and also sustainable waste management in the long term through flexibility regarding proposals for new facilities that may be required in any part of the Plan Area as a result on future planned growth (and strategic level growth) over the plan period. Uncertain impacts surround flood risk. However potential negative impacts are neutralised in conjunction with Preferred Approach 21.

**HRA**

The assumption is that no new WwTW sites will be required and that any new facilities would need to meet the requirements of the Water Framework Directive.

The PA indicates that any facilities will need to be in accordance with other policies within the WDD, of which PA23 would be of paramount importance in avoiding likely significant effects on European sites.

The policies within the WDD will ensure that no significant adverse effects can arise as a result of this Preferred Approach.

**Clinical Waste Treatment Facilities**

**5.36** Clinical waste includes human and animal tissue, blood, excreta, drugs, swabs and syringes, which is generated by the healthcare sector plus similar materials are found in the household waste stream. Treatment of clinical waste requires it to be incinerated, rather than landfilled as a disposal technique, due to health and safety requirements.

**5.37** Hospital incinerators are regulated under the Local Authority Air Pollution Control system, established by Part I of the Environmental Protection Act 1990, which required them to meet strict new emission standards by October 1995. As a result, most of the 800 or so former units in the UK have closed down. These old units are being replaced by a smaller number of larger units, each serving several medical institutions and each with their own on site waste storage facilities. Currently there are no clinical incinerators operating in Essex or Southend-on-Sea and most clinical waste arising within the Plan area is exported to appropriate treatment facilities elsewhere within the neighbouring Authorities. This presents a capacity gap for this waste treatment type within the Plan area, but at present this does not appear to pose difficulties within Essex or Southend-on-Sea. However, if the amount of clinical waste rises during the plan period there may be a need for future facilities within the Plan area. Preferred Approach 13 sets out locational criteria for assessing any clinical waste treatment facility proposal that may come forward.

## Preferred Approach 13

### Locational criteria for clinical waste treatment facilities

Proposals for new clinical waste treatment facilities will be supported at the following locations, where they do not undermine the provision of waste development on strategic sites allocated in Preferred Approach 5, and are in accordance with all other relevant policies in the WDD:

- within existing industrial estates used for general industry (B2), storage and distribution (B8) or land allocated as such in an adopted local plan or LDF document;
- within existing waste management sites or in association with other waste management development;
- within areas of degraded, contaminated or derelict land;
- as part of a hospital complex.

### Reason

*While clinical waste could continue to be exported under current contractual arrangements, it would improve net self-sufficiency in the Plan area if more of it was treated within the Plan area. Therefore, a criteria approach is preferred as it is unknown whether there is a viable amount of clinical waste arising, or if it is more appropriate for the waste industry to continue exporting this waste for disposal.*

## Question 12

Do you agree with the Preferred Approach 13 set out above? Please explain your answer.

### **Evidence Base for Preferred Approach 13**

The Capacity Gap Report Update 2011 shows that clinical waste is currently exported out of the Plan area. Whilst this could continue during the Plan period, flexibility for proposals to come forward to treat clinical waste within the Plan area is provided by Preferred Approach 13.

### **Sustainability Appraisal**

There will be significant positive impacts on the sustainable use of land and sustainable transport arrangements where the Preferred Approach seeks to minimise transport distances not only through locational criteria, but in ensuring flexibility for clinical waste treatment facilities to be located within the plan area. Uncertain impacts surround air quality and public nuisance and access where facilities may become present in the Plan Area over the plan period, rather than clinical waste being transported to neighbouring authorities/WPAs although impacts should be neutralised through preferred Approach 23.

### **HRA**

The PA indicates that facilities will need to be in accordance with other policies within the WDD, of which PA23 would be of paramount importance in avoiding likely significant effects on European sites.

The policies within the WDD will ensure that no significant adverse effects can arise as a result of this Preferred Approach.

### **Fit with WDD Vision**

Encouraging development of clinical treatment facilities within the Plan area fits well with the vision to achieve net self-sufficiency in waste management within Essex and Southend. It also supports the vision in achieving the reduction of transport distances that waste travels.

### **Consultation Responses to WDD: Issues and Options Paper**

There was no specific issue addressing clinical waste in the Issues and Options Paper, however, it was referred to within the section on Hazardous Waste (Issue 16), although the suggested policy approach related to hazardous landfill capacity, which is discussed below under Preferred Approach 19.

## **Mechanical Biological Treatment, Anaerobic Digestion And Autoclaving Facilities**

**5.38** Treatment stabilises the waste by removing the biodegradable element and produces a higher grade Compost-Like Output (CLO) or a Solid/Stabilised Output Material (SOM), which can be used as an energy source or disposed of to non-hazardous landfill. Additional recycling can take place at the start or end of the treatment process. MBT is a hybrid process that uses both mechanical and biological techniques to sort and separate mixed waste. In its simplest form, MBT stabilises biodegradable waste, by removal of the water and degradable element (gases and odour) and effectively drying the material out with overall bulk reduction operation for mixed residual waste (the process often includes an element of recycling to remove recyclable

materials at the start and/or at the end of the process). The residual output is a Stabilised Output Material and/or Compost-Like Material which can be disposed of to non-hazardous landfill (at present regulations do not allow it to be used on land, or to be defined as inert waste). More complex, larger scale systems are integrated facilities which can also involve Anaerobic Digestion or composting of the biodegradable fraction and production of compost-like output or Refuse Derived Fuel (RDF) that can be used for energy production (e.g. in an energy from waste facility).

### Key Characteristics

**5.39** The capacity of MBT facilities can range from 50,000 tonnes per annum (tpa) to large scale facilities in excess of 500,000 tpa. The permitted facilities at Rivenhall, Stanway and Courtauld Road, Basildon are examples of large scale MBTs with planning permission in the Plan area. MBT is an enclosed process and buildings are similar to industrial warehouses in appearance and size, making them compatible with a range of land uses including existing industrial land. Where refuse derived fuel output is produced, this can present opportunities to integrate MBT facilities with built developments for energy recovery where the output can be used as a fuel for combined heat and power production.

**5.40** Enclosed processes are unlikely to attract vermin and there is little potential for litter or water pollution to occur. The processes are enclosed with negative pressure to control airflow, odour and vermin and this is supported by air filtration processes. Typically traffic movements can increase in the locality of an MBT facility, although this impact could be reduced at smaller sites. MBT facilities typically have a minimal impact on air emissions; those that do arise are primarily associated with traffic. Vehicular movements and mechanical operations may increase noise levels.

### Anaerobic Digestion

**5.41** Anaerobic Digestion (AD) treats biodegradable organic waste such as sewage sludge, farm slurry, silage effluent, household kitchen and garden and paper wastes in an enclosed vessel using bacteria to decompose the waste in the absence of oxygen. This process breaks down the waste, generating useable products including: biogas, which can be used to produce energy; fibre, for soil conditioning; and liquor, which can be used as a liquid fertilizer. The treatment process and outcomes also link the process to energy recovery.

### Key Characteristics

**5.42** AD plants can be developed on two broad scales. At the smaller end of the scale (approximately 0.15ha), facilities treating locally produced waste can be situated on a wide range of sites, including farm and agricultural locations. Larger sites (approximately 0.6ha) are usually more suited to a business/industrial location. The nature of AD plants presents opportunities to integrate them with other land uses such as waste water treatment plants to utilise residual organic waste and within built development and produce energy generated from the AD process.

**5.43** As AD plants are enclosed, they are not normally associated with vermin, litter or water pollution and any odour can be kept to a minimum with air filtration systems. Typically, traffic movements can increase in the locality of an AD plant, although this impact could be reduced at smaller sites and where transport by rail or water can take place. AD plants typically have a minimal impact on air emissions; those that do arise are primarily associated with traffic. Vehicular

movements and mechanical operations may also increase noise levels. As this process presents an opportunity for energy production, there may be a positive impact on finite resources and climate change, by reducing the need for the combustion of fossil fuels for energy.

## Autoclaving

**5.44** Autoclaving is a pre-treatment system; the process has been traditionally used to treat clinical waste but is increasingly being used as a treatment for mixed waste. Autoclaving involves the high pressure sterilisation of waste by steam, which cooks the waste. The biodegradable fraction of the waste is reduced to a flock-like material which in some cases can be thermally treated as a type of Refuse Derived Fuel. The process has the potential to be a supplier of heat, potentially a resource for other industries. The process cleans metals, glass and plastic which can be directly extracted as recyclables. The process often leaves a residual fraction of waste that would typically be landfilled.

### Key Characteristics

**5.45** Autoclaving plants are often built on a small scale and are typically modular in nature, allowing components to be added or taken away as waste streams or volumes change. Autoclaving is an enclosed process and buildings are similar to industrial warehouses in appearance and size, making them compatible with a range of land uses including existing industrial land. Where refuse derived fuels are produced, this can present opportunities to integrate autoclaving facilities with built developments. Autoclaving facility characteristics are similar to those of Mechanical Biological Treatment (MBT).

**5.46** Autoclaving is an enclosed process which is unlikely to attract vermin and there is little potential for litter or water pollution to occur. Odour is generally not an issue as air filtration can be employed to reduce odours to a minimum. Typically traffic movements can increase in the locality of an autoclave plant, although this impact could be reduced at smaller sites and where transport by rail or water can take place. Autoclaving plants typically have a minimal impact on air emissions; those that do arise are primarily associated with traffic. Vehicular movements and mechanical operations may increase noise levels. Like the AD process, the generation of energy in the form of heat or power and creation of refuse derived fuels can have a positive impact on climate change and the use of finite fossil fuels, by reducing the need for the traditional and unsustainable energy generation.

**5.47** In general, as part of the energy production, facilities are likely to include flue stacks/chimneys, therefore they can have further reaching visual impacts.

## Preferred Approach 14

### Locational Criteria for Mechanical Biological Treatment, Autoclaving and Anaerobic Digestion Facilities

Proposals for new Mechanical Biological Treatment (MBT), Autoclaving and Anaerobic Digestion (AD) Facilities will be supported at the following locations, where they are in accordance with all other relevant policies in the WDD:

- within the IWMF sites which are safeguarded and allocated in Preferred Approach 4 & 5;
- within existing industrial estates used for general industry (B2), storage and distribution (B8) or land allocated as such in an adopted local plan or LDF document;
- within existing waste management sites or in association with other waste management development;
- within areas of degraded, contaminated or derelict land;
- as part of district heating schemes (AD, Autoclaving, and MBT with CHP output only);
- in association with Waste Water Treatment Works (AD only);
- in agricultural locations and farms (AD only).

In addition, proposals for new strategic Mechanical Biological Treatment, Autoclaving and Anaerobic Digestion Facilities (as defined in **Table 8**) which come forward on non-allocated sites would have to demonstrate that they do not undermine the provision of waste development on strategic safeguarded and allocated sites.

#### Reason

*MBT, Autoclaving and AD Facilities are similar to industrial buildings, e.g. warehouses, and can be located within industrial and employment areas as they should not give rise to odours due to the enclosed processes. AD facilities are generally smaller scale than MBTs and Autoclaving, and can be accommodated in rural areas as well. Consultees supported most of the suggested locations for these facilities in the Issues and Options Paper, but some locations received lower support or generated negative scores in the SA (e.g. open countryside) and are considered not suitable to easily accommodate those facilities without potentially impacting neighbouring uses and environmental features of those locations.*

## Question 13

Do you agree with the Preferred Approach 14 set out above? Please explain your answer.

## Evidence Base for Preferred Approach 14

In identifying *where* waste is to be managed and disposed of, PPS10 identifies the key opportunities as:

- On-site management of waste where it arises;
- A broad range of locations, including industrial sites, brownfield land, and identifying opportunities to co-locate facilities together and with complementary activities, reflecting the concept of resource recovery parks.

In addition, the physical and environmental constraints on development set out in Annex E of PPS10, including existing and proposed neighbouring land uses, also need to be taken into account when assessing suitability of sites for waste management facilities.

### Fit with WDD Vision

Encouraging development of MBT, AD and autoclaving facilities fits with the vision to manage more waste higher up the waste hierarchy and to divert more waste from landfill. Furthermore, the vision requires that where waste cannot be recycled, then opportunities should be taken to recover value/energy from residual waste.

### Consultation Responses to WDD: Issues and Options Paper

#### Issue 6: Locational Criteria for Recycling and Composting Facilities (Questions 15-17)

There was considerable spread in the consultation responses received in relation to the locational criteria for AD, MBT and autoclaving facilities. The most popular options for the locations of different scale facilities are shown below:

##### Anaerobic Digestion Plant

Small-scale – Industrial estates used for general industry, storage and distribution or co-location with existing waste facilities.

Large-scale – Co-location with existing waste facilities.

##### Mechanical and Biological Treatment

Small-scale – Co-location with existing waste facilities.

Large-scale – Industrial estates used for general industry, storage and distribution.

##### Autoclaving

Small-scale - Co-location with existing waste facilities.

Large-scale - Industrial estates used for general industry, storage and distribution and co-location with existing waste facilities.

## Sustainability Appraisal

There will be significant positive impacts on the sustainable use of land, energy generation and sustainable waste management. There are uncertain impacts on air quality although mitigation of this issue need not be included in this Preferred Approach.

### HRA

The PA indicates that facilities will need to be in accordance with other policies within the WDD, of which PA23 would be of paramount importance in avoiding likely significant effects on European sites.

The policies within the WDD will ensure that no significant adverse effects can arise as a result of this Preferred Approach.

## Energy From Waste, Pyrolysis And Gasification Facilities

### Energy from Waste

**5.48** The energy from waste process involves burning of waste material at high temperatures, directly releasing the energy contained within the waste. Where waste is to be burnt, the energy released is captured and used to provide a renewable energy source (heat or power) to help reduce carbon emissions and can positively contribute to alternative energy sources (coal power stations). Energy from waste is distinctly different from mass burn incineration, which incinerates waste for its own sake and does not recover any energy value, be it heat or power. Incineration / mass burn incineration is below both energy recovery and landfill disposal in the waste hierarchy and does not contribute to reducing climate change, it has not therefore been pursued as an option for the WDD.

### Key Characteristics

**5.49** Energy from waste facilities often require sites that are capable of accommodating large built structures and associated infrastructure (typically the size of a site can range between 1.7-34 ha). Energy from waste facilities are similar in their appearance and characteristics to other facilities used for various industrial processes and it is often suitable to locate facilities with other general industrial uses. There is also potential for co-locating energy from waste facilities with other waste facilities producing a fuel source (e.g. MBT, autoclaves and AD) and in close proximity to built development where the energy produced can be utilised. Energy from waste can be utilised in various forms, including combined heat and power and district heating or converting the energy to electricity for connection to the national grid.

**5.50** In common with other combustion processes, combustion of waste results in emissions to air. Although strictly regulated, a number of gases are allowed to be released into the atmosphere. Therefore, energy from waste facilities require a chimney in order to release gases at an acceptable height. Given the large scale of the buildings and presence of a chimney, there is potential for visual intrusion and impact on local character, although this can be minimised with appropriate siting and good design. Energy from waste facilities result in a large number of HGV movements, which can impact on congestion and local air quality. Where waste can

be transported by rail or water, this impact could be reduced. Vehicular movements and mechanical operations may also increase noise levels. Vermin, litter, water pollution and odour are generally not associated with energy from waste as it is a completely enclosed process.

## **Pyrolysis and Gasification**

**5.51** Pyrolysis involves heating organic (carbon based) waste at high temperatures in conditions of limited or no oxygen to produce a mixture of gaseous and liquid fuels and a solid inert residue (mainly carbon). Gasification operates at a higher temperature range than pyrolysis and results in a higher concentration of hydrogen in the gas produced by the process. The heat produced can be used to generate energy as heat and/or power which can be utilised.

### **Key Characteristics**

**5.52** Both types of facility are typically small scale (a site of approximately 1-2ha is required), are compatible with most small /medium sized industrial activities and are often sited alongside waste treatment facilities such as composting and recyclable processing. Energy can be generated from gasification and pyrolysis in one of two ways: the gas produced is combusted and the steam produced from the process can be used to generate energy in a steam turbine; or the gas can be refined to a high quality and used in a gas engine to produce electricity. There are advantages associated with locating pyrolysis facilities in close proximity to built development where the energy produced can be utilised.

**5.53** Vermin, litter and odour are generally not associated with pyrolysis as it is a completely enclosed process. As with energy from waste facilities, the most significant issue is air emissions. Although strictly regulated, a number of gases are allowed to be released in to the atmosphere. Therefore, gasification and pyrolysis facilities require a chimney in order to release gases at an acceptable height. Given the nature of the buildings and presence of a chimney, there is potential for visual intrusion and impact on local character, although this can be minimised with appropriate siting and good design. Pyrolysis facilities have less vehicular movements than some other waste facilities but they still involve a large number of HGV movements, which can impact on congestion and local air quality. Where waste can be transported by rail or water, the impact could be reduced. Vehicular movements and mechanical operations may also increase noise levels.

**5.54** While Chapter 3 shows that there is no capacity gap for new energy from waste/recovery capacity, it must be recognised that if one or more of the Integrated Waste Management Facilities are not developed, additional treatment and energy from waste capacity would be required. Any new proposals on non-allocated sites would be assessed against Preferred Approaches 6 and 15.

## Preferred Approach 15

### Locational criteria for Energy from Waste, Pyrolysis and Gasification Facilities

Proposals for new Energy from Waste, Gasification and Pyrolysis facilities will be supported at the following locations, and where they are in accordance with all other relevant policies in the WDD:

- within the IWMF sites which are safeguarded and allocated in Preferred Approach 4 & 5;
- within existing industrial estates used for general industry (B2), storage and distribution (B8) or land allocated as such in an adopted local plan or LDF document;
- within existing waste management sites or in association with other waste management development;
- within areas of degraded, contaminated or derelict land;
- as part of district heating schemes;
- co-located with other commercial and industrial users of heat and power.

In addition, proposals for new strategic EfW, gasification and pyrolysis facilities (as defined in **Table 8**) which come forward on non-allocated sites would have to demonstrate that they do not undermine the provision of waste development on strategic safeguarded and allocated sites.

All proposals must demonstrate that emissions to air and water from the process will not have an unacceptable impact on human health or the environment. In determining whether this requirement is met the WPAs will need to be satisfied that the Environmental Permitting requirements have also been met.

#### Reason

*Energy from Waste, Gasification and Pyrolysis facilities are similar to other industrial buildings, and can be located within industrial and employment areas. However, they emit gases to air and may also discharge waste water used in the processes, therefore, a particular requirement relating to emissions to air and water has been included, while recognising that the facilities will also have to meet the requirements of the Environment Agency's Environmental Permitting regime. Consultees supported most of the suggested locations for these facilities in the Issues and Options Paper, but some locations received lower support or generated negative scores in the SA (e.g. open countryside) and are considered not suitable to easily accommodate those facilities without potentially impacting neighbouring uses and environmental features of those locations.*

## Question 14

Do you agree with the Preferred Approach 15 set out above? Please explain your answer.

## Evidence Base for Preferred Approach 15

In identifying where waste is to be managed and disposed of, PPS10 identifies the key opportunities as:

- On-site management of waste where it arises;
- A broad range of locations, including industrial sites, brownfield land, and identifying opportunities to co-locate facilities together and with complementary activities, reflecting the concept of resource recovery parks.

In addition, the physical and environmental constraints on development set out in Annex E of PPS10, including existing and proposed neighbouring land uses, also need to be taken into account when assessing suitability of sites for waste management facilities.

### Fit with WDD Vision

Supporting development of energy from waste, gasification and pyrolysis facilities fits with the vision to manage more waste higher up the waste hierarchy and divert more waste from landfill than currently occurs in the Plan area. Furthermore, the vision requires that where waste cannot be recycled then opportunities should be taken to recover value/energy from residual waste.

### Consultation Responses to WDD: Issues and Options Paper – Issue 8: Locational Criteria for Energy Recovery Facilities (Questions 18-19)

There was considerable spread in the consultation responses received in relation to the locational criteria for energy from waste, gasification and pyrolysis facilities. The most popular options for the locations of different scale facilities are shown below:

#### Energy recovery facilities

Both small and large-scale – Industrial estates used for general industry, storage and distribution.

#### Pyrolysis and Gasification

Small-scale - Industrial estates used for general industry, storage and distribution.

Large-scale - Co-location with existing waste facilities and industrial estates used for general industry, storage and distribution.

The Overview Workshop Report on the WDD: Issues and Options Consultation showed that the principle public concern in relation to the location of **energy recovery facilities** is the potential impact of noise from lorries. The potential to use heat and power from facilities was seen as the most significant advantage of locating these facilities close to the source of arisings.

## **Sustainability Appraisal**

There will be no significant positive impacts resulting from this Preferred Approach. Minor positive impacts will occur on biodiversity, water quality, sustainable use of land and soils, air quality, health and public nuisance where all proposals must demonstrate that emissions to air and water from the process will not have an unacceptable impact on human health or the environment. Uncertain impact exists on landscapes where the different types of facility have different requirements for chimney height.

## **HRA**

It is identified in the supporting text that there is currently no capacity for further EfW facilities.

The PA indicates that facilities will need to be in line with other WDD policies of which PA23 would be of paramount importance in avoiding likely significant effects on European sites.

The policies within the WDD will ensure that no significant adverse effects can arise as a result of this Preferred Approach

## 6 DISPOSAL

**6.1** Final disposal as a means of managing waste is the least preferred option in the Waste Hierarchy and is to be the last resort. However, landfill will continue to be needed during the Plan period for all residual waste that cannot be recycled, treated, or recovered (and for the residual waste remaining following treatment), albeit the amount of landfill will decrease over time. This chapter sets out the Preferred Approaches and locational criteria for all landfill types should new sites be needed and come forward during the Plan period.

**6.2** While the Plan makes provision for increasing amounts of waste to be recycled, composted or treated to meet statutory targets for diverting waste from landfill, there will continue to be a need for some landfill capacity to dispose of residual waste, as shown in **Table 4** in **Chapter 3**.

### Locational Criteria For Landfill

#### Inert Landfill

**6.3** Inert landfills are permitted and licensed to dispose of inert waste only. This waste includes soils, clays, excavation materials and inert construction and demolition wastes and is described as biologically stable waste which does not undergo any significant physical, chemical or biological transformations. The landform can be restored back to original contours without the need for doming to allow for settlement.

**6.4** In total, there is a requirement for the plan to manage 43,274kt (or 28.9million m<sup>3</sup>) of inert waste arising over the Plan period. However, taking into account the inert waste recycling capacity that will be available during the Plan period, the need to meet landfill diversion targets, and the existing inert landfill capacity of 2,841 thousand m<sup>3</sup>, **Table 4** identifies the potential additional capacity need of just 628 thousand m<sup>3</sup> (or 0.6 million m<sup>3</sup>), which will need to be planned for from 2019/20.

**6.5** The location and need for inert landfill as a restoration material is dictated by the approach taken in the emerging Minerals Development Document (MDD), which is identifying the need and preferred location for mineral extraction.

**6.6** The Minerals Development Document will consider the restoration options available and identify a range of feasible restorations proposals for each site including restoring to a low level or former ground levels, creating water bodies, and other habitats for biodiversity potential. The majority of the sites suggested and assessed in the MDD proposed restoration at a low level which would not require inert landfill. This reflects the national policy to divert waste away from landfill thereby de-coupling the traditional links of mineral working and landfill.

**6.7** In response to the WDD Call for Sites a number of inert landfill sites were proposed, predominantly based on the suggested sites for mineral extraction in the MDD. The suggested inert landfill sites have been assessed through the WDD site assessment process (see **Chapter 8, Appendices D & E**). There is more than enough potential capacity to meet the 0.6 million m<sup>3</sup> inert landfill requirement from the suggested sites that passed Stage One of the site assessment process.

**6.8** The identification of preferred sites for inert landfill will firstly be led by the MDD, to ensure that appropriate mineral extraction sites are identified that meet the strategy in the MDD, mineral need and acceptability of impacts of extraction, including deliverable and feasible restoration schemes. These sites are being reviewed as part of responses received on the MDD: Preferred Approach consultation. Given that inert wastes generally travel relatively short distances, it is appropriate to ensure that there is a spread of sites to serve the whole Plan area. Allocating just one or two of the best scoring sites (which have sufficient capacity to take the total inert landfill requirements in the Plan area) from those that came forward from the Call for Sites would not be appropriate.

**6.9** It would not be appropriate to 'over allocate', i.e. to allocate all of the sites that passed Stage One of the site assessment process. It would be contrary to national policy, the waste hierarchy and the WDD's Vision, Strategic Objectives and Strategy to allocate more sites for inert infill than necessary meet the requirements of the Plan area. Over allocation could discourage recycling and create an unacceptable impact on the timescales for mineral sites to be worked and restored, and deliverability within the plan period of both the MDD and WDD.

**6.10** Therefore, while a range of suitable sites for **inert landfill** may have the potential for allocation in Preferred Approach 16 to meet the capacity gap of 0.6 million m<sup>3</sup>, the decision about which sites are preferred site allocations will be informed by the MDD site selection process. The MDD will address the mineral need and location of the preferred extraction sites as well as the feasibility of restoration, which is moving away from landfill in recognition of national policy de-coupling extraction and landfill such that alternative forms of restoration are being developed.

## Preferred Approach 16

### Potential Strategic Site Allocations for Inert Landfill

A number of sites, particularly those identified as preferred in the MDD, are potentially suitable for allocation to meet the 0.6 million m<sup>3</sup> capacity gap for new inert landfill (see **Chapter 8** and **Appendix E**). Of the proposals that have come forward as part of the WDD Call for Sites none have currently been selected as preferred for allocation in the WDD (for the reasons described above). However, some of the suggested inert landfill sites that came forward and did not fail the Stage One site assessment may be suitable for partial infilling. The selection will depend on whether these sites come through as preferred sites for the MDD.

It is the intention that enough sites are identified to provide for a reasonable geographic spread of sites across the Plan area (to support key areas where construction and demolition wastes are being generated). Reliance on one or two top scoring sites from the current site assessment process is not considered appropriate to achieve this and would result in longer than necessary or unfeasible transport distances for inert wastes.

Proposals for inert landfill at the final allocated site(s) will be supported provided they are in line with the policies in this WDD.

#### Reason

*There are more than sufficient potentially suitable, strategic sites to meet the identified inert landfill capacity gap. The decision about which specific site(s) are to be allocated needs to be informed by the MDD site selection process. This is because most of the inert waste proposals feature as part of a restoration scheme for a suggested mineral extraction site in the MDD. Licensed, operational inert landfills, and those with planning permission have been safeguarded through Preferred Approach 4.*

## Question 15

Do you agree with the Preferred Approach 16 set out above? Please explain your answer.

## Non-Hazardous Landfill Facilities

**6.11** Non-hazardous landfills are licensed to accept non-inert and non-hazardous waste (i.e. MSW and C&I). This is biodegradable waste or waste which may undergo significant physical, chemical or biological change once landfilled eg food waste. Due to the biodegradable nature of the waste, the landfill must be engineered and designed with lining for the site to be self-contained and domed to allow for settlement. This is to reduce any adverse environmental impacts or emissions as the waste degrades, such as collection of leachate and methane gas.

**6.12** Based on the estimated volumes of MSW and C&I waste that will still need to be landfilled after increasing prevention and reuse, and recycling and treatment targets have been met, under the worst case scenario of higher arisings (as forecast in the Local Waste Strategy scenario) **Table 4 in Chapter 3** shows that there could be a total non-hazardous landfill capacity gap of 782 thousand m<sup>3</sup> by 2031 (new landfill capacity would be needed from 2027/28). However in the best case scenario, if more MSW and C&I waste is pre-treated (as forecast in the Submitted RSS scenario), then there could actually be a small surplus in non-hazardous landfill capacity (159 thousand m<sup>3</sup>) at the end of the Plan period. As stated in paragraph 3.32, these figures exclude the permitted landfill void available at Stanway beyond the plan period.

**6.13** A number of proposals have been submitted in response to the WDD: Issues and Options call for sites, which proposed the restoration method as non hazardous landfill. Therefore, there would be sufficient capacity to meet a gap if it occurred later in the Plan period. The majority of these WDD suggested sites include sites previously submitted for consideration for mineral extraction through the emerging Minerals DD. To clarify, the Minerals DD will address the mineral need and location of the preferred extraction site as well as the feasibility of restoration, which is moving away from landfill in recognition of national policy de-coupling extraction and landfill such that alternative forms of restoration are being developed.

**6.14** Given that if the potential capacity gap occurred it would be very close to the end of the Plan period, and may not occur depending on how much waste arisings are actually produced, the Preferred Approach is to **not** allocate any new non-hazardous landfill sites, but to monitor the requirements closely during review periods of the WDD. In addition, waste management technologies are continually improving. There is a national focus on minimising waste and creating a 'Zero Waste' economy in which materials are re-used, recycled or recovered wherever possible and only disposed of as the very last resort and optimising energy recovery. Therefore, it is anticipated that later in the Plan period more waste than planned for could be managed higher up the waste hierarchy through further waste minimisation and increased rates of recycling, composting and treatment, and this will be kept under review through the Annual Monitoring process and formal reviews of the WDD. Furthermore there have been a number of permissions for the extension of time to complete mineral working and landfilling, in part due to the economy but also with the increase in actual landfill diversion occurring, such that there may be further requests to extensions of time to complete the restoration. Given the above context and national policy for plans to provide for net self-sufficiency and aims for landfill diversion, it is considered inappropriate to allocate additional non-hazardous landfill sites. Regard also needs to be had to the Minerals DD which is promoting alternative forms of restoration. However, Preferred Approach 17 below provides locational criteria for assessing any new non-hazardous landfill proposals that might come forward.

## Preferred Approach 17

### Locational criteria for non-hazardous landfill facilities

Proposals for new non-hazardous landfill facilities will only be acceptable if monitoring shows a need for non-hazardous landfill of Essex and Southend-on-Sea's waste, which will not undermine the achievement of statutory recycling and recovery targets, and where there is a clear restoration need identified.

The WPAs will require the proposed measures for restoring the land to be feasible and to result in an acceptable and sustainable after-use.

The landfilling of waste that could practicably be recycled, composted or recovered will not be acceptable.

Proposals for new non-hazardous landfill facilities that meet the criteria above may only be acceptable in the following locations subject to the principle of mineral extraction being approved as a preferred site within the Minerals DD, and provided they are in line with the policies in this WDD:

- Permitted Landfill sites safeguarded through Preferred Approach 4;
- Void space within existing landfill currently only designated for disposing of C&I, which have the potential to also accept MSW;
- Proposals for an extension of time to complete the permitted restoration within the boundary of existing landfill facilities.

Non-hazardous landfill proposals would not be permitted within 250m of residential dwellings or other sensitive land uses unless special measures are included to control dust, noise and odour.

Landfill gas utilisation plants for energy recovery will be required at existing and new non-hazardous landfill sites, unless it can be demonstrated that it is not practicable (e.g. due to inability to make connection to the national grid without unreasonable harm to residential amenity and/or the environment). Adequate arrangements will be made to prevent landfill gas migration to adjoining land. The proposed method of landfill gas collection is environmentally and visually acceptable for as long as facilities have to remain.

#### Reason

*Landfill facilities have to be sited within existing void (existing mineral workings) and where there is an essential requirement to restore a site which cannot be achieved without fill material, to return the land to an appropriate beneficial after use, including agriculture. No new non-hazardous landfill facilities are expected to be needed, until possibly later in the Plan period. However, this will be kept under review. Licensed, operational non-hazardous landfills, and those with planning permission have been safeguarded through Preferred Approach 4.*

*Landfill of non-hazardous waste is seen as the least favourable option for managing MSW and C&I waste, therefore, no new sites are allocated, and any new proposals would have to demonstrate that the waste cannot be practicably recycled, composted or recovered. Consultees supported all three of the suggested locations in the Issues & Options Paper equally.*

## Question 16

Do you agree with the Preferred Approach 17 set out above? Please explain your answer.

### Hazardous Landfill Facilities

**6.15** Hazardous landfills are licensed to accept hazardous wastes. These are wastes that can pose substantial or potential threats to public health or the environment, for example asbestos and contaminated soils. Some non-hazardous landfill sites may be able to take certain stable non-reactive hazardous wastes within a designated cell designed for depositing Stable Non-Reactive Hazardous Wastes (SNRHW).

**6.16** The single hazardous landfill facility within the Plan area has been granted an extension of time until 2013 only. This means that by the adoption of the WDD (2014) there will be no landfill voidspace for Stable Non Reactive Hazardous Wastes (SNRHW). Therefore, an additional 52 thousand m<sup>3</sup> hazardous waste approximately will require disposal to landfill between 2014 and 2031, which represents only 0.06% of the total amount of waste that needs managing over the Plan period. If current practices continue, an average of 2,888m<sup>3</sup> hazardous waste per year will need to be exported for landfill (the principal destinations are Suffolk, Kent and Northamptonshire, as well as Oxfordshire, Peterborough and Hertfordshire). This only equates to just under 4% of the total amount of waste in the Plan area requiring landfill, and it is likely that this will continue in co-operation with the recipient Authorities. If circumstances change in the future, and some of this waste can no longer be exported, further voidspace will need to be provided within the Plan area and any proposals would be assessed against Preferred Approach 18.

## Preferred Approach 18

### Locational criteria for hazardous landfill facilities

Proposals for new hazardous landfill facilities will only be acceptable where they meet the Plan area's identified requirement for hazardous waste disposal for Essex and Southend-on-Sea's waste. The WPAs will require the proposed measures for restoring the land to an acceptable and sustainable after-use to be feasible.

The landfilling of waste that could practicably be treated or recovered will not be acceptable.

Proposals for new hazardous landfill facilities that meet the criteria above would be suitable in the following locations, provided they are in line with the policies in this WDD:

- void space created through mineral workings;
- within extensions to existing landfill facilities.

Hazardous landfill proposals would not be permitted within 250m of residential dwellings or other sensitive land uses unless special measures are included to control emission, dust, noise and odour.

#### Reason

*Landfill facilities have to be sited within existing void (existing mineral workings) and where there is an essential requirement to restore a site which cannot be achieved without fill material, to return the land to an appropriate beneficial after use, including agriculture. Landfill of hazardous waste is seen as the least favourable option for waste management, therefore, no new sites are allocated, and any new proposals would have to demonstrate that the waste cannot be practicably treated or recovered.*

## Question 17

Do you agree with the Preferred Approach 18 set out above? Please explain your answer.

## Locational Criteria For Landraising

### Inert Landraise

**6.17** Proposals for landraising continue to come forward, despite there being no real requirement for this. The Plan area also has existing mineral sites in need of restoration that struggle to receive sufficient inert infill material. Therefore, after meeting recycling and recovery targets, the use of inert waste materials for infill should be prioritised on mineral extraction sites in need of restoration before landraising. The WDD preferred approach is that landraising for its own sake (without being required as part of a specific engineering project or restoration need) will not be permitted.

**6.18** With the introduction of the Landfill Tax, companies pay tax on waste disposed of at landfill. The intention of this tax is to divert waste from landfill and encourage greater re-use, recycling and recovery in line with the Waste Hierarchy. However, situations can arise where waste is disposed of through other routes, which avoid the payment of this tax.

**6.19** While generally aimed at the disposal of waste, some waste can be deposited above ground for the purpose for engineering or construction projects including: agricultural improvement, (drainage), landscaping or for the construction of sea and flood defences. Within the plan area, there has been significant recent interest in engineering projects using construction and demolition waste for landscaping of golf courses and diverting this waste from landfill voids.

**6.20** The Government has amended the exemptions for re-use of inert material in construction projects; volumes of waste used in landraising activities will no longer be exempt and will require a full environmental permit. In addition, landraising requires planning permission.

**6.21** When a local planning authority is dealing with a proposal that includes landraising, consideration needs to be given to whether the landscaping proposals are needed for the development or whether they are more associated with importation of waste for its own sake. The importation of waste can be for the purpose of recovery (associated with a genuine engineering or construction use) or for the disposal of waste on land to avoid tax (i.e. landraise). This is particularly applicable within Essex as a two tier authority area, to determine which local planning authority should handle the planning application.

**6.22** The guidance from CLG is included within the EPOA Guidance: “Development involving County Matters” which assists with this distinction (see the EPOA website at: [www.the-edi.co.uk/epoaguidancedocuments.php](http://www.the-edi.co.uk/epoaguidancedocuments.php)). If the proposal constitutes a waste related development, Essex County Council as the Waste Planning Authority would be the local planning authority in the two tier area of the plan responsible for determining such an application.

## Preferred Approach 19

### Locational criteria for landraising

The landfilling or landraising of inert waste that could practicably be re-used, recycled, or reprocessed will not be acceptable. Landfill and landraising for own sake with no restoration or engineering need will not be accepted.

Where landraising is proposed as part of an engineering project to achieve the primary development, the principle of the landuse proposed as the primary development must be in compliance with the district LDF, and must demonstrate the minimum amount of material required to meet the development.

Proposals for inert landraising that constitutes a waste disposal activity (rather than a valid engineering and/or construction project), will only be acceptable where there is an identified need for restoration and for inert waste to be disposed of in this manner. This will only be acceptable where this does not undermine the provision of waste development on strategic inert landfill sites safeguarded in Preferred Approach 4, or delivered through Preferred Approach 16, and/or where no acceptable alternative form of waste management can be made available to meet the need.

All proposals must demonstrate that they would not divert inert waste material away from existing mineral workings / landfill sites which require the material for restoration purposes.

All inert landfill and landraise proposals would need to meet the policies in this WDD.

The WPAs will require the proposed development and use of the inert waste to be an acceptable and sustainable use.

### Reasons

*Inert landfill requirements should be met through the strategic allocated site (once decided), therefore there should be no need for more inert landfills, and they must only be accepted where there is an identified need for restoration. Landraise is considered to be even lower priority than landfill in the waste hierarchy, so will only be acceptable where it is required for restoration.*

## Question 18

Do you agree with the Preferred Approach 19 set out above? Please explain your answer.

## **Evidence Base for Preferred Approaches 16-19**

Disposal is at the bottom of the Waste Hierarchy, but there is still an identified requirement for landfill during the Plan period, of pre-treated residual inert, non-hazardous and hazardous waste.

### **PA16**

#### **Sustainability Appraisal**

There will be significant positive impacts in the long term regarding agriculture and landscape in instances where infilling occurs to restore minerals allocations back to agriculture and landscape levels post extraction and though no top scoring sites being relied upon solely, partial infilling could occur to restore the wider Plan Area.

#### **HRA**

Landfill sites have potential to lead to adverse effects on European sites through a number of pathways of impact (reduced air quality; reduced water quality; predation and disturbance; coastal squeeze).

The allocation of strategic sites is considered within the Site Selection document, which is currently subject to a separate HRA.

The PA seeks to support the uses identified for these sites within the Site Selection process. It does indicate that these uses must be in line with other WDD policies of which PA23 would be of paramount importance in avoiding likely significant effects on European sites.

It is also anticipated that borough LDFs will contain similar environmental protection policies, but these are beyond the scope of this HRA to assess.

It is considered that in the absence of non-allocated sites being required, the policies within the WDD and the HRA process for the Site Selection document will ensure that no significant adverse effects can arise as a result of this Preferred Approach.

### **PA17**

#### **Sustainability Appraisal**

There will be significant positive impacts on sustainable waste management in operation where the landfilling of waste that could practicably be recycled, composted or recovered will not be acceptable. There will also be significant positive impacts on energy generation in the in operation where landfill gas utilisation plants for energy recovery will be required at existing and new non-hazardous landfill sites. Additionally there will be significant long term impacts on agricultural land and landscapes through restoration.

#### **HRA**

The PA indicates that facilities will need to be in accordance with other policies within the WDD, of which PA23 would be of paramount importance in avoiding likely significant effects on European sites, since it specifically advises that '*Waste management development*

*proposals will be acceptable ... provided satisfactory provision is made to avoid unacceptable impacts and maximise opportunities in respect of the following ... biodiversity within the Plan area (including internationally, nationally and locally designated sites... In particular, proposals should avoid ... disturbance or harm to species, as a result of noise, visual impacts (including light pollution) dust or vibration'.*

The policies within the WDD will ensure that no significant adverse effects can arise as a result of this Preferred Approach

## **PA18**

### **Sustainability Appraisal**

There will be a significant positive impact on the sustainable use of land and agricultural land where WPAs will require the proposed measures for restoring the land to an acceptable and sustainable after-use to be feasible, and that proposals for new hazardous landfill facilities would be suitable in void space created through minerals workings where there is an essential requirement to do so. This is also the case for landscape character in the long term. There will also be significant positive impacts on sustainable waste management by pushing the management of hazardous waste up the waste hierarchy.

### **HRA**

The PA indicates that facilities will need to be in accordance with other policies within the WDD, of which PA23 would be of paramount importance in avoiding likely significant effects on European sites.

The policies within the WDD will ensure that no significant adverse effects can arise as a result of this Preferred Approach

## **PA19**

### **Sustainability Appraisal**

There will be significant positive impacts on sustainable waste management through specifying that the landfilling of inert waste that could be re-used, recycled or reprocessed will not be acceptable. Also, inert landraising that constitutes a waste disposal activity will only be acceptable where there is an identified need for restoration and for inert waste to be disposed of in this manner.

### **HRA**

Landraise sites for inert waste have potential to lead to adverse effects on European sites through pathways of impact such as reduced air quality, disturbance, and coastal squeeze.

The PA does indicate that uses must be in line with other WDD policies of which PA23 would be of paramount importance in avoiding likely significant effects on European sites.

It is considered that the policies within the WDD will ensure that no significant adverse effects can arise as a result of this Preferred Approach.

### **Fit with WDD Vision**

Despite supporting development of waste management facilities higher up the Waste Hierarchy (as required in the Vision) there remains an identified need to dispose of some residual inert, non hazardous and hazardous waste. The Vision highlights all waste facilities will be located, designed and operated to minimise potential adverse impacts on the general amenity, health and safety of local communities, the natural environment and the landscape and townscape of Essex and Southend-on-Sea.

Making provision for these types of waste facility fits with achieving net self-sufficiency within the Plan area.

### **Consultation Responses to WDD Issues and Options**

The Overview Report on the Joint WDD Issues and Options Consultation Workshops showed that the principle public concerns in relation to the location of **landfill facilities** are environmental issues, such as gases, as well as the effects of traffic movements to and from the sites, with these being seen as the key disadvantages of locating such facilities close to waste arisings. The main advantage identified by this approach was the potential to save fuel and avoid traffic congestion.

#### **Issue 9: Locational Criteria for Disposal Facilities (Question 20)**

The consultation responses showed a very even split of opinion between the options proposed, with 15, 14 and 15 respondents showing support for Options 1 (void space within existing C&I landfill sites to accept MSW, subject to environmental considerations), 2 (void space within mineral working and landfill sites) and 3 (within extensions to existing landfill facilities) respectively. Three people selected the fourth Other option. However, a large proportion of the respondents selected two or three of the types of locations, while a large number of other respondents made comments but did not select any of the options.

#### **Issue 22: Landraising and the use of waste for construction and engineering projects (Question 23)**

21 of the 23 respondents who answered the consultation question broadly agreed with the suggested policy criteria for landraising and the use of waste for construction and engineering projects. Concern was expressed in relation to landraising for golf courses, but did include suggestions of using inert material to create artificial mounds for skiing and mountain biking.

#### **Issue 16: Hazardous waste (Question 28)**

12 of the 16 respondents who answered the consultation question broadly agreed with the suggested policy criteria for dealing with hazardous waste, which included both looking for a hazardous landfill site within the Plan area, and in the interim continuing to export hazardous waste out of the Plan area.

## Radioactive Waste

**6.23** Bradwell Nuclear Power Facility is the principal source of radioactive waste arisings within the Plan area. The arisings comprise Very Low Level (VLLW), Low Level (LLW) and some Intermediate Level (ILW) Radioactive Wastes.

**6.24** As discussed in **Chapter 3**, the status of Bradwell, the national repository in Cumbria and the new national repository is still uncertain. Therefore, the WDD Preferred Approach must address this issue, and be flexible enough to deal with the two options:

- Plan for small quantities of radioactive waste from decommissioning the current nuclear power station only.
- Plan for larger quantities of waste generated from the possible development of a new nuclear power facility within the plan period.

**6.25** In addition to radioactive waste from the nuclear industry, small volumes of VLLW are produced in the Plan area principally from hospitals and universities. Tonnages and management routes for these wastes are not recorded by the Environment Agency. However, the 2010 Inventory of UK Radioactive Waste<sup>(32)</sup> notes that these very small volumes can be safely disposed of with municipal, commercial or industrial waste (either directly or after incineration). Therefore, it is not necessary to allocate any new sites to deal with non-nuclear VLLW.

### Preferred Approach 20

#### Locational criteria for intermediate, low and very low level radioactive wastes

Proposals for facilities for the treatment, storage or disposal of ILW, LLW or VLLW generated at Bradwell nuclear power station will only be acceptable within the Nuclear Licensed Areas at Bradwell, where:

- This is consistent with the national strategy for managing ILW, LLW and VLLW and discharges and/or the decommissioning plans for the Bradwell power station, and;
- The outcome of economic and environmental assessments justify its being dealt with on site, and;
- Facilities are located and designed in order to minimise adverse impacts on the environment and human health.

#### Reason:

Bradwell nuclear power station has planning permission for long-term storage on site for LLW and VLLW for waste arising at Bradwell nuclear power station as part of the decommissioning process. A small amount of other low level radioactive waste is generated at hospital and educational facilities (e.g. universities and research institutes) within the Plan area and can be safely disposed of with municipal, commercial or industrial waste.

32 [www.nda.gov.uk/ukinventory/documents/Reports/upload/2010-UK-Radioactive-Waste-Inventory-Summary-of-the-2010-Inventory.pdf](http://www.nda.gov.uk/ukinventory/documents/Reports/upload/2010-UK-Radioactive-Waste-Inventory-Summary-of-the-2010-Inventory.pdf)

## Question 19

Do you agree with the Preferred Approach 20 set out above? Please explain your answer.

### **Evidence Base for Preferred Approach 20**

There is an identified requirement to plan for small quantities of radioactive waste from decommissioning the current nuclear power station and other sources such as hospitals, with a potential requirement for larger quantities of waste generated from the possible development of a new nuclear power facility within the plan period.

### **Sustainability Appraisal**

There will be no significant positive impacts arising from this Preferred Approach, however, minor positive impacts exist for biodiversity, water, flood risk, soils, historic environment, landscape character, air quality and health where proposals for facilities for the treatment, storage or disposal of ILW, LLW or VLLW generated at Bradwell nuclear power station only will be acceptable within the Nuclear Licensed Areas at Bradwell. Further minor positive impacts will be realised for sustainable waste management, sustainable transport arrangements, and public nuisance and access where facilities are only to be located in very close proximity to the majority of sources of this type of waste in the Plan Area, reducing transport distances, minimising nuisance from access arrangements, and providing only for net self-sufficiency.

### **HRA**

The development of facilities for radioactive waste at Bradwell would be likely to require project-level HRA since the facility lies in close proximity to Dengie SPA/Ramsar, the Blackwater Estuary SPA/Ramsar and Essex Estuaries SAC.

The PA does indicate that environmental assessments will be required, and therefore in itself the PA is not likely to lead to adverse effects on European sites.

### **Fit with WDD Vision**

Making provision for these specialist types of waste fits with achieving net self-sufficiency in waste management in the Plan area.

### **Consultation Responses to WDD Issues and Options Paper**

#### **Issue 17: Low level radioactive waste (Question 29)**

The consultation responses showed a fairly even split of opinion between agreeing that radioactive wastes should be disposed of at Bradwell Power Station, or within the Plan area, and disagreeing with this approach.

## 7 DEVELOPMENT MANAGEMENT POLICIES

**7.1** The adopted WDD will form part of the Development Plan for Essex and Southend, which will be used to determine waste related planning applications. The WDD is required to be in conformity with the national policy framework (which is currently under review as described in **Chapter 2**). However, the current PPGs and PPSs will remain in place until the new National Planning Policy Framework is adopted. Importantly, it is not currently proposed that PPS 10: Sustainable Waste Management is encompassed within the national planning policy framework.

**7.2** The existing national policy framework encourages new waste management facilities to meet waste capacity needs in suitable locations, and seeks to avoid or mitigate adverse impacts that may arise (see **Chapter 2**). In addition, there is an existing regulatory framework for all waste management activities, administered by the Environment Agency, which includes the licensing of sites, regulating the movement of hazardous wastes and issuing Environmental Permits. This regulatory framework seeks to protect residential amenity and the environment.

**7.3** In addition to these existing policy frameworks and pollution control regimes, a limited range of policies is needed in the WDD to manage and control the effects of new waste management facilities within the Plan area. It is important that the WDD does not repeat or reformulate existing national, regional or local policy. Planning decisions will be made in accordance with the Development Plan unless material considerations indicate otherwise. Identification of a preferred site for waste management in this WDD does not preclude full consideration of other sites when a detailed application is made. When determining planning applications, the WPA will examine each application against the all the policies of the Waste DD.

**7.4** Waste related development proposals may occasionally raise unusual issues but generally there will be a number of common aspects that would need to be examined. eg impact on local amenity, landscape quality, wildlife conservation, groundwater protection and highway infrastructure. Where the proposed development requires the submission of an Environmental Statement (because it is of a type listed in Schedule 1 of the Town and Country Planning (Environmental Impacts Assessment) Regulations 1999, or is a type listed in Schedule 2 and is likely to have significant environmental effects by virtue of its nature, size or location) then all impacts should be addressed and mitigating measures incorporated into the planning application.

### Mitigating And Adapting To Climate Change

**7.5** There is a need to reduce waste management activities that contribute to climate change, while also adapting to the changing climate.

**7.6** Historically, a substantial proportion of waste arising in the Plan area has been sent to landfill. As discussed earlier in the WDD and in line with the Vision and Strategic Objectives, much of this waste can be re-used or recycled, reducing the demand on primary resources and greenhouse gases that are produced from landfill and contribute to climate change. There are also opportunities for recovering energy from waste, which could be used to provide power where new development is planned across the Plan area. The majority of waste arisings within the Plan area are transported by road and this too generates harmful greenhouse gas emissions therefore the need and impact of transportation should be minimised.

**7.7** Essex and Southend-on-Sea are amongst the driest areas in the country and there is a need to minimise demands on water resources, particularly in the context of climate change. Large parts of the Plan area are at risk from flooding, again an issue that will be compounded by climate change.

## Preferred Approach 21

### Mitigating and Adapting to Climate Change

Proposals for new waste management facilities should through their construction and operation, minimise their potential contribution to climate change by reducing carbon emissions, incorporating energy and water efficient design measures and being adaptable to future climatic conditions.

**A:** Proposals for new waste facilities should set out how this will be achieved, which may include:

- Demonstrating how the location, design including associated buildings and transportation related to the development will limit carbon emissions;
- Supporting opportunities for decentralised and renewable or low-carbon energy supply, subject to compliance with other policies in the development framework;
- Use of sustainable drainage systems, water harvesting from impermeable surfaces and layouts that accommodate waste water recycling;
- Incorporating proposals for sustainable travel including travel plans where appropriate.

**B:** Proposals for new waste management facilities will only be permitted where:

- There would not be an unacceptable risk of flooding on site or elsewhere as a result of impediment to the flow of storage or surface water;
- Existing and proposed flood defences are protected and there is no interference with the ability of responsible bodies to carry out flood defence works and maintenance where applicable;
- There would not be an unacceptable risk to the quantity and quality of surface and groundwaters, or impediment to groundwater flow.

#### Reason

*There is a need to reduce waste facility contributions to climate change whilst adapting to its effects, including to avoid development in areas of coastal and fluvial flood risk and preventing increased pressure on natural resources such as water. The specific criteria for mitigating and adapting to climate change, as set out previously in the Issues and Options consultation, were approved by the majority of respondents and so have mostly been included in the preferred approach, with some amendments made where appropriate in response to particular comments. The criteria in the Issues and Options Paper relating to demonstrating the need for the facility and opportunities to manage waste further up the Waste Hierarchy are covered by Preferred Approaches 1, 5 and those relating to the locational criteria for different waste facilities.*

## Question 20

Do you agree with the Preferred Approach 21 set out above? Please explain your answer.

### **Evidence Base for Preferred Approach 21**

Essex and Southend-on-Sea are amongst the driest areas in the country and there is a need to minimise demands on water resources, particularly in the context of climate change. Large parts of the Plan area are at risk from flooding, again an issue that will be compounded by climate change. Landfills and transportation of waste can contribute to climate change. Therefore, there is a need both to try to reduce those contributions (which has been addressed through other Preferred Approaches seeking to reduce reliance on landfill and reduce distances waste travels within the Plan area), but also to ensure new waste developments are adapted to and do not exacerbate the effects of the changing climate.

### **Sustainability Appraisal**

There will be significant positive impacts on water quality, flood risk, air quality and energy. There will also be significant positive impacts for sustainable transport where proposals for new waste facilities should set out how the location and transportation related to the development will limit carbon emissions. Uncertain impacts are predicted on the historic environment and landscape character where design measures specific to energy and water efficiency may not be compatible with nearby historical assets or local landscape features, although any negative impacts are likely to be effectively neutralised by the criteria of Preferred Approach 23.

### **HRA**

No HRA implications and the use of SuDS and travel plans at new waste management facilities are positive in terms of air quality and water quality.

### **Fit with WDD Vision**

Seeking to reduce contributions to climate change and develop waste management infrastructure that is adapted to climate change effects is a key element of the vision.

### **Consultation Responses to WDD: Issues and Options Paper – Issue 12: Mitigating and Adapting to Climate Change (Question 24)**

Of the 29 respondents who selected either 'yes' or 'no', 23 broadly agreed with the suggested policy criteria for mitigating and adapting to climate change.

## Transportation Of Waste

**7.8** The transportation of waste within the Plan area should be as efficient as possible and in line the transport policies contained within the Essex Transport Strategy, particularly Policy 6 – Freight Movement. This means locating waste management facilities as close to the source of the waste as is practicable, such that the distance the waste has to travel is minimised. It also means increasing self-sufficiency in waste management so that waste does not need to be transported long distances from neighbouring authorities. Encouraging a greater proportion of material to be re-processed locally would also minimise waste miles.

**7.9** Opportunities to transport waste by more sustainable modes, such as rail and water, should be encouraged wherever practicable. However, it should be noted that the use of rail or water in transporting waste may result in an increase in distance waste travels, contrary to principles of net self-sufficiency, and the national / regional policy context to treat waste close to source of arisings. As set out in the WDD Vision, priority should still be given to managing waste as close to source as possible to reduce carbon emissions.

**7.10** Furthermore, to transport waste by rail and water may not always be practicable given limited suitable connections, double handling of waste, and the locations, the need to handle waste close to source of arisings and the location of facilities, therefore it is recognised that waste will continue to be transported by road, as this is currently the most feasible transport mode. This means that Heavy Goods Vehicles (HGVs) and Extra Long Vehicles transporting waste will continue to place pressure on the main highway network in the Plan area. There is a need for waste facilities to have access to the most appropriate roads for HGVs / Extra Long Vehicles as defined in the ECC Highways Development Management Policies February 2011 Appendix A Route Hierarchy Plan (i.e. main roads: Motorways, Trunk road, Strategic routes and Main Distributors and in some circumstances appropriate and suitable secondary distributors). This should help to reduce the impact from HGVs on the local road network without compromising highway safety. Many waste management facility proposals are likely to be within industrial estates, where access arrangements from the industrial estate are assumed to have satisfactory access to the Strategic and Main Distributor route network and are usually already established and likely to be suitable for HGVs. However, it will be important that transport to and from the new waste facility proposal does not cause a detrimental impact on the access route and has a minimal impact on local communities.

**7.11** Preferred Approach 22 sets out these priorities for considering waste transport in proposals for new waste management facilities. This includes a hierarchical approach to appropriate connection to the highway network and also recognises the different scales and potential locations of waste facilities. In particular the emphasis is for waste facilities to be located within existing designated industrial areas / allocated land for employment. As such it needs to be recognised that waste activities are also industrial / employment activities, such that appropriately located industrial estates / employment land with suitable access to the highway network are equally suited to waste employment activities. The potential impacts of waste traffic on local residential amenity and safety is addressed in Preferred Approach 23.

## Preferred Approach 22

### Transportation of waste

The order of preference for transportation of waste to and from proposed new waste management facilities would be:

1. Wherever practicable, seek opportunities to transport waste by rail or water (where this does not undermine the WDD aim of net self-sufficiency).
2. Road access via a short length of suitable existing road to a suitable existing junction with the main road network (trunk road, strategic route or main distributor) as defined within Highways Development Management Policies February 2011, Route Hierarchy Plan.
3. Road access directly on to the main road network where there is no existing access point or junction. This would involve development of a new access point, which would need to be constructed in accordance with the County Council's Highway Standards.
4. Where access to the main road network is not feasible, road access via a suitable existing secondary road should be used before gaining access on to the main road network, subject to scale of development, capacity of the road is adequate and there will be no undue impact on road safety or the environment.

### Reason

*Although transportation of waste by rail and water is preferred over longer distances due to the lower carbon emissions associated, it is recognised that there will continue to need to be transportation of waste by road to help manage Essex and Southend's waste within the Plan area (and achieve the aim of net self-sufficiency). There is a hierarchical approach to the policy for connection to the highway, to cover the range and scale of potential waste developments. Providing a clear order of preference for how HGVs will access new waste facilities is important to mitigate potential adverse effects by getting HGV traffic onto appropriate main roads / routes as quickly and with as little effect on amenity as possible, i.e. trunk roads, strategic routes and main distributors. This will protect the safety and efficiency of the highway network and minimise situations where lorries will directly impact on local residential amenity.*

## Question 21

Do you agree with the Preferred Approach 22 set out above? Please explain your answer.

## **Evidence Base for Preferred Approach 22**

The transportation of waste must be consistent with the transport policies contained within the Essex Transport Strategy, particularly Policy 6 – Freight Movement. The highways Development Management Policies February 2011, Appendix A Route Hierarchy Plan which sets out the main roads as Trunk, Strategic routes and main distributor. Policy W4C (Highway/Transport Access) in the Essex and Southend-on-Sea Adopted Waste Local Plan was one of the five most frequently referred to WLP policies when making planning application decisions during the monitoring period 1<sup>st</sup> April 2009 to 31<sup>st</sup> March 2010<sup>(33)</sup>, therefore, elements of that policy have been included in the Preferred Approach.

## **Sustainability Appraisal**

There will be significant positive impacts on sustainable transport through seeking opportunities for the transportation of waste by rail or water in the first instance.

## **HRA**

The PA is positive in terms of sustainable transport approaches and reduced atmospheric pollution. There are no likely significant effects on European sites.

## **Fit with WDD Vision**

Seeking to reduce transportation of waste by road (and in turn reduce contributions to climate change) is a key element of the vision.

## **Consultation Responses to WDD: Issues and Options Paper – Issue 13: Highway and Transportation (Question 25)**

Of the 41 respondents to this question, 27 broadly agreed with the suggested policy approach for Highway and Transportation, two disagreed and the remainder did not state they agreed or disagreed.

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33 Minerals and Waste Annual Monitoring Report. 1st April 2009 - 31st March 2010. Essex County Council, December 2010

## General Considerations For All Waste Management Proposals

**7.12** There are a number of potential benefits and impacts that need to be considered for all waste management proposals, many of which are already covered by national policy in PPSs. The draft NPPF sets out the Government's economic, environmental and social planning policies for England. It states that planning must operate to encourage sustainable economic growth and not act as an impediment. Therefore, significant weight should be placed on the need to support economic growth through the planning system.

**7.13** The waste industry contributes to the economy of the Plan area and is a major employer, and has a role to contribute to the economic growth of the plan area, therefore, this needs to be taken into consideration when assessing planning applications for waste development, alongside other potential impacts of the development.

**7.14** However, a number of the potential impacts of waste facilities are actually addressed by the pollution control regime regulated by the Environment Agency. PPS 10 advised that in considering planning applications for waste management facilities, waste planning authorities should concern themselves with implementing the planning strategy in the development plan and not with the control of processes which are a matter for the pollution control authorities. Therefore, Preferred Approach 23 aims to cover all the potential benefits and impacts of waste development that are not already addressed by Preferred Approaches 1-22, or the Environmental Permitting regime.

**7.15** The planning and pollution control regimes are separate but complementary. Pollution control is implemented through the environmental permitting regime and regulated by the Environment Agency. It is concerned with preventing pollution through the use of measures to prohibit or limit the release of substances to the environment to the lowest practicable level. It also ensures that ambient air and water quality meet standards that guard against impacts to the environment and human health.

**7.16** The planning system (and this WDD) seeks to control the development and use of land in the public interest for waste management and should focus on whether development is an acceptable use of the land, and the impacts of those uses on the development and use of land. Waste planning authorities should work on the assumption that the relevant pollution control regime will be properly applied and enforced.

**7.17** Waste planning and pollution control authorities should work closely to ensure integrated and timely decisions under the complementary regimes. This can be assisted by applicants preparing and submitting planning and pollution control applications in parallel.

**7.18** Unless it can be shown that no noise nuisance would arise or an overriding special case is made, all waste management facilities will be subject to restrictions on their hours of operation. These will normally be 07.00 to 18.30 Monday to Friday and 07.00 to 13.00 on Saturday with no working on Sundays and Public Holidays other than for essential maintenance. To avoid queues of Heavy Goods Vehicles before 07.00 consideration will be given to the provision of parking off the public highway where appropriate but this should not be regarded as a precursor to the relaxation of the start time. There may be occasions where queuing provision is still desirable but a later start time will have to be imposed because of local circumstances.

## Preferred Approach 23

### General Considerations for all Waste Management Development Proposals

Waste management development proposals will be acceptable, subject to meeting the other policies of this WDD and provided satisfactory provision is made to avoid unacceptable impacts and maximise opportunities in respect of the following:

- The potential for economic and social benefits through provision of the facility, including employment generation.
- The potential effect on general amenity of neighbouring occupiers, in particular as a result of noise, odour, visual impacts (including light pollution) dust or vibration from both the facility operation and HGV transportation of waste to and from the facility. Hours of operation may be restricted in order to mitigate these potential effects on residential amenity.
- The potential to enhance and/or protect geodiversity and biodiversity within the Plan area (including internationally, nationally and locally designated sites and species or features identified in UK, Essex and Southend-on-Sea Biodiversity Action Plans, and the green infrastructure network of the Plan area). In particular, proposals should avoid loss or fragmentation of geological assets or habitat, disturbance or harm to species, as a result of noise, visual impacts (including light pollution) dust or vibration from both the facility operation and transportation of waste to and from the facility. Periods of facility construction and hours of operation may be restricted seasonally to mitigate potential effects on protected species.
- The potential effect on countryside, including landscape and visual impacts and light pollution of tranquil areas. Proposals should be well designed and seek opportunities to enhance or be integrated with the surrounding environment and relevant landscape/townscape character area in accordance with the Essex and Southend-on-Sea Landscape Character Assessments and the relevant district/borough level landscape assessments.
- The potential effect on historic, archaeological or cultural sites/assets and their setting.
- The potential effect on agricultural land, in particular loss of Grades 1, 2 or 3a agricultural land.
- The potential effect on public open space and Public Rights of Way, to safeguard and protect amenity of the users of these recreational assets and where practicable improve access and connections to the PROW network.
- The potential effect on local aerodromes and airports, in particular the risk of bird strike within safeguarding areas.
- The potential effect on the purposes of the Green Belt in locations within the Metropolitan Green Belt.

#### Reasons

*PPS10 states that it should not be necessary to use planning conditions to control the pollution aspects of a waste management facility where the facility requires a permit from the pollution control authority. In some cases, however, it may be appropriate to use planning conditions to control other aspects of the development. For example, planning conditions could be used in respect of transport modes, the hours of operation where these*

*may have an impact on neighbouring land use, landscaping, plant and buildings, the timescale of the operations, and impacts such as noise, vibrations, odour, and dust from certain phases of the development such as demolition and construction.*

*The specific criteria for this policy, as set out previously in the WDD: Issues and Options consultation, were supported by the majority of respondents and so have been taken forward as the preferred option, with amendments having been made where appropriate in response to particular comments, and some additions (e.g. the potential for employment generation).*

## Question 22

Do you agree with the Preferred Approach 23 set out above? Please explain your answer.

### Evidence Base for Preferred Approach 23

Policy W10E (Development Control) and W10F (Hours of Operation) in the Essex and Southend-on-Sea Adopted Waste Local Plan was one of the five most frequently referred to WLP policies when making planning application decisions during the monitoring period 1st April 2009 to 31st March 2010<sup>(34)</sup>. All elements of those two policies have been covered within Preferred Approaches 21-23.

The need for Health Impact Assessments was considered in the WDD: Issues and Options report. However, government research<sup>(35)</sup> has concluded that modern waste management practices have at most a minor effect on human health. In addition, PPS10: Planning for Sustainable Waste Management states in paragraph 30 that: *“Modern, appropriately located, well-run and well-regulated, waste management facilities operated in line with current pollution control techniques and standards should pose little risk to human health.”* It also states that the detailed consideration of a waste management process and the implications, if any, for human health is the responsibility of the pollution control authorities. Where concerns about health are raised, waste planning authorities should avoid carrying out their own detailed assessment of epidemiological and other health studies. The Environment Agency is responsible for issuing environmental permits for waste facilities, and these include conditions relating to odour.

PPS5: Planning for the Historic Environment seeks to establish a more modern, integrated approach which defines the historic environment in terms of heritage assets to be conserved. Its objectives are to apply the principles of sustainable development to proposals involving the historic environment, to conserve and, where appropriate, enhance England’s heritage assets in a manner appropriate to their significance, and to contribute to our knowledge and understanding of our past by ensuring that opportunities to capture evidence from the historic environment and make this publicly available are taken, particularly if a heritage asset is to be lost.

PPS7: Sustainable Development in Rural Areas recognises that there are areas of landscape outside of national landscape designations that are highly valued locally and encourages the development of criteria-based policies to provide a sufficient level of protection to these landscapes. The 2003 Landscape Character Assessment for Essex and Southend<sup>(36)</sup> formed the basis for a county-wide landscape strategy, aiming to guide development control and the future management and conservation of the local landscape.

PPS9: Biological and Geological Conservation encourages the development of criteria-based policies at the local level, against which proposals for any development on, or affecting, local sites will be judged (separately from those criteria applied to nationally important sites).

### **Sustainability Appraisal**

There will be significant positive impacts on biodiversity, the historic environment, landscape character and health and open space. Further significant impacts will be realised for public nuisance and access and in providing economic opportunities. There will be an uncertain impact on air quality. Although associated factors are considered regarding transport movements, air quality issues-related impacts on AQMAs and Potentially Significant Junctions (for air quality) are not listed as a consideration.

### **HRA**

Proposals must adequately address potential impacts on biodiversity. There are no HRA implications.

### **Fit with WDD Vision**

The general considerations will help to minimise potential adverse impacts on the general amenity, health and safety of local communities, the natural environment and the landscape and townscape of Essex and Southend, and maximise the positive contribution that waste facilities can make e.g. in supporting sustainable economic growth, improving or enhancing natural, built and historic environmental and recreational assets etc.

### **Consultation Responses to WDD: Issues and Options Paper – Issues 19, 20, 21 and 23**

#### **Issue 19: Health Impact Assessment – Question 31**

Of the 27 respondents who expressed a preference for one of the options, 13 chose Option 4 from the Issues and Options consultation question (requiring a HIA on a case by case basis, where there is potential for significant effects on health). However, it was recognised that there is a need to specify the criteria which will determine whether there is a 'potential for significant effects' on human health.

34 Minerals and Waste Annual Monitoring Report. 1st April 2009 – 31st March 2010. Essex County Council, December 2010

35 Review of Environmental and Health Effects of Waste Management: Municipal Solid Waste and Similar Wastes. Prepared for Defra by Enviro and University of Birmingham, May 2004

36 Chris Blandford Associates (2003) Essex and Southend-on-Sea Replacement Structure Plan Review – Essex Landscape Character Assessment

Twelve respondents also suggested an alternative approach under Option E ('other'), which tended to be a combination of two of the other options. Two of the respondents felt that HIA should be required in relation to all waste facilities.

### **Issue 20: Local Landscape and Townscape – Question 32**

19 of the 32 respondents on this consultation question broadly agreed with the suggested policy criteria for protecting local landscape and townscape. The consultation responses also included suggestions that:

- Local level landscape character assessments should be used as well as the county level assessment;
- The policy should require the appropriate restoration of waste sites; and
- More emphasis should be placed on the potential landscape enhancement that can be achieved through landfill sites.

### **Issue 21: Local Biodiversity – Question 33**

20 of the 32 respondents on this consultation question broadly agreed with the suggested policy criteria for protecting local biodiversity. Respondents also suggested that:

- Reference should be made to local level biodiversity/green infrastructure plans and strategies;
- The final bullet point should be amended to include a requirement to demonstrate that no alternative sites are available; and
- The policy should be broadened to make reference to geodiversity as well as biodiversity and international and national designated sites.

### **Issue 23: General Considerations for all Waste Management Development – Question 35**

22 of the 32 respondents to this consultation question broadly agreed with the suggested policy criteria for general considerations for all waste management development. However, it was also suggested that:

- The criteria should make reference to the potential for impacts on aerodrome safety;
- The criteria should make reference to the potential impacts on health (as well as amenity);
- The criteria should make reference to the potential impacts on green belt land;
- The potential impacts on biodiversity and geodiversity should also be included;
- A number of the consultation responses in relation to the criteria for the landscape preferred approach felt that more emphasis should be given to the historic environment.

## 8 PREFERRED SITES AND SELECTION METHODOLOGY

**8.1** This chapter describes the site selection methodology used to select and assess both Preferred Sites and Non Selected Sites in this WDD.

**8.2** Preferred Approach 5 (PA5) in Chapter 5 sets out the Strategic Site Allocations for Recycling and Recovery for the following facilities

- 4 Municipal Solid Waste (MSW) Transfer stations (the need for two further MSW transfer stations is also raised in PA5)
- 2 In-vessel Composting facilities;

Further site specific details of these Preferred Sites are set out in **Appendix E**.

**8.3** Of the 33 Proposals on 30 sites that came forward during the WDD I&O call for sites, only 6 have gained Preferred Site status for the above waste facilities. The identification of the Preferred Site allocations, including comparison to other non-selected sites, is outlined in **Appendix E Preferred Sites and Non Selected Sites**. The site assessment methodology for the site being included is outlined later in this chapter, with full details of the site assessment methodology in **Appendix D**.

**8.4** Preferred Approach 5 also identified the three IWMF sites with existing permissions at Rivenhall, Stanway and Courtauld Road and these have been given Preferred Site status in addition to being Safeguarded under Preferred Approach 4. This is on the basis that they are fundamental to the delivery of the overall strategy. Given that they already have planning permission, it is considered unnecessary to reassess them in detail in respect of the methodology below.

**8.5** The Waste Development Document has identified a potential need for facilities to serve Essex and Southend-on-Sea throughout the plan period to 2031 at appropriate locations. The actual capacity gaps are identified in Chapter 3. The need and principles to plan for additional sites is addressed in Chapters 4-6, including the use of appropriate locational criteria. As a consequence it is not proposed to identify additional sites for C&D Recycling and Landfill.

**8.6** The Minerals DD is addressing the need and location for preferred extraction sites, and this will encompass the feasibility of restoration. Restoration is moving away from landfill in as much as national policy is de-coupling extraction and landfill, such that alternative forms of restoration are generally being preferred. The decision about which extraction site will become WDD site allocations for inert landfill will be informed by the MDD site selection process. **It is therefore not possible to identify new / additional landfill voidspace at this stage in this WDD Preferred Approach.** This will take place at a later stage.

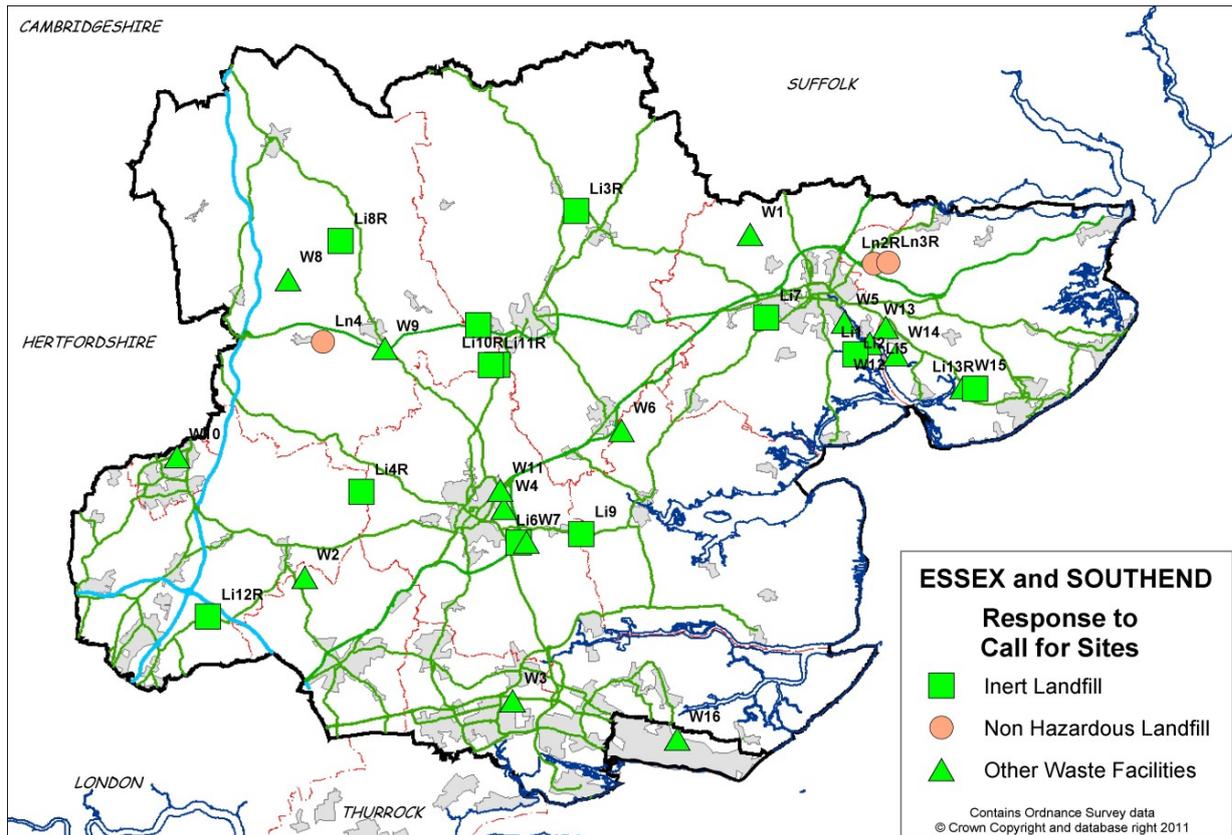
### Site Selection

**8.7** The consideration of potential sites and waste proposals began with a Call for Sites in the WDD: Issues and Options Paper. The waste industry and local landowners suggested specific sites and proposal(s) for waste management based on what they thought would be most appropriate on the sites. This process identified a total of 33 proposals on 30 sites for consideration and met the basic information requirements.

**8.8** Details of these sites are included in the WDD Evidence Base document Call for Sites - Overview of Sites Submitted for Consideration<sup>(37)</sup> This is available to view on both ECC and SBC websites for information purposes only.

**8.9** The sites submitted through the “Call for Sites” included a wide range of possibilities such as site specific extensions, new sites, existing Waste Local Plan allocations and sites on previously developed land. **Map 3** shows the location of the 33 suggested proposals. **Table 10** summarises how many sites were suggested for various waste management facilities, non-hazardous or inert landfill.

**Map 3 All Sites Suggested for Consideration**



37 [www.essex.gov.uk/Environment%20Planning/Planning/Minerals-Waste-Planning-Team/Planning-Policy/Policy-Consultations/Current-Consultations/WDD-Issues-Options/Documents-and-supporting-evidence-page.aspx](http://www.essex.gov.uk/Environment%20Planning/Planning/Minerals-Waste-Planning-Team/Planning-Policy/Policy-Consultations/Current-Consultations/WDD-Issues-Options/Documents-and-supporting-evidence-page.aspx)

**Table 10 Summary of the Suggested Waste Proposals on Sites Submitted for Consideration**

Facility Type	Number of proposals	Comments
Waste Management Facilities	16	Various – including all different types of recycling and recovery facilities
Inert Landfill Sites	14	Total void space of 11.95 million m <sup>3</sup> (of which seven include aggregate recycling)
Non Hazardous Landfill Sites (household & commercial & Industrial waste)	3	Residue for Household, Commercial & Industrial waste, total void space 1.75 million m <sup>3</sup>

**8.10** The 16 suggested waste management facilities covered all levels of the waste hierarchy.

**8.11** Landfill is, by its nature, a temporary use of land and is often associated with restoration of mineral workings. The selection of preferred landfill sites is therefore dependent upon the need for restoration governed by a need for mineral extraction. The MDD will of necessity lead this site selection process.

### The Site Selection Methodology

**8.12** The methodology for selecting preferred sites for allocation in the WDD has been designed to deliver the waste capacity requirements. This is consistent with Preferred Approach 3, i.e. ensuring that new waste management facilities meet existing demand and the planned growth, particularly in Colchester, Chelmsford, Harlow, Basildon and Southend. They are also to be located, designed and operated to minimise potential adverse impacts on the general amenity of local communities, the natural environment, the landscape and townscape of Essex and Southend.

**8.13** Since the publication of the WDD Evidence Base document Call for Sites - Overview report, all 33 proposals have been visited and assessed to inform the overall site assessment and site selection process. Specific topics assessed include Ecology; Landscape, Historic Environment, Highways and Planning Background. In addition the sites have been separately assessed through the Strategic Environmental Assessment / Sustainability Appraisal process.

**8.14** This WDD: Preferred Approach consultation is seeking your comments and feedback on both the Site Selection Methodology (see below) and on the individual Preferred and Non Selected sites (**See Appendix E**).

**8.15** The site selection methodology comprised five stages:

- STAGE 1: Assessment of each site against seven Exclusionary criteria;
- STAGE 2: A further more detailed assessment on the sites which successfully passed Stage 1. Stage 2 examines nine other Site Selection Criteria, including proximity to the five key urban centres;

- STAGE 3: Cross-checking and moderation of all site assessments / scores to ensure consistency between assessors;
- STAGE 4: Identification of sites (e.g., higher scoring) which could meet the overarching spatial strategy;
- STAGE 5: Sustainability Appraisal, confirmation of the Preferred Sites for inclusion in this document.

Full details of the Site Selection Methodology is set out in Appendix D and summarised below.

**8.16** An important element of the methodology is the initial Stage 1 and Stage 2 assessment criteria and the manner in which the scoring system is applied, this is described below. Stage 3 was essentially a review of the work by in-house professionals. The details of the Sustainability Appraisal (Stage 5) is set out in its own separate report (with summary details included in Appendix E).

### Stage 1 - Exclusionary Criteria

**8.17** Stage 1 involved a 'high level sieving' exercise to identify which of the suggested waste proposals cannot meet one or more of the seven 'Exclusionary Criteria' set out in **Table 11** below. Any proposal that failed to meet the requirements of an Exclusionary Criteria was rejected at this initial stage and not considered further within subsequent stages.

**Table 11 Stage One Exclusionary Criteria**

<b>Exclusionary Criteria</b>	<b>Reason</b>
<i>1. SITE SIZE/AREA</i>	All proposals must demonstrate that they can be satisfactorily accommodated on site. It would need to be demonstrated that vehicles can manoeuvre satisfactorily and sufficient land is available for any required mitigation measures such as planting and landscaping.
<i>2. DELIVERABILITY</i>	The facility proposed must be deliverable in planning terms, and within the plan period.
<i>3. HIGHWAY, RAIL or WATER CONNECTION</i>	There is sufficient information to demonstrate that it will be possible to gain an acceptable means of access to and from the site (as appropriate) as a physical junction and capacity on the highway network. Alternatively there must be a suitable access to the rail network or accessible by water.
<i>4. FLOOD RISK</i>	The site and facilities is acceptable in both coastal and fluvial flood risk terms.  The key assumptions relating to the exclusionary criteria around flood risk are based around the Sequential Test in PPS25.
<i>5. GROUND WATER ACCEPTABILITY</i>	Ground water vulnerability is an important constraint particularly in respect of landfill e.g. leachate. This is primarily affected by the hydro-geology of the site and surrounding area.

Exclusionary Criteria	Reason
	No waste sites should be located in Source Protection Zone 1. The Environment Agency has provided its initial input as to whether any landfill sites are unacceptable on the basis of their location.
6. ENVIRONMENTALLY ACCEPTABLE / DESIGNATED SITE	Seeks to protect waste uses, unless of a small / enclosed nature or inert landfill for restoration, should be avoided within 1km of a Natura 2000 site unless the HRA suggests a low likelihood of any detrimental impacts. Energy from waste facilities are considered potentially more sensitive depending on their scale and nature within 10km from a Natura 2000 site. International or European designated sites, which with the exception of Epping Forest are mainly located on the coast in Essex, proximity was also taken into consideration.
7. LAND USE COMPATIBILITY	The proposal for waste development for a given site should be compatible with the type of existing land use set out in Table 12 below.

Table 12 Land Use Compatibility Matrix

Potential waste facility	Compatible land uses
Energy from Waste	Co-location with big energy users (e.g., hospital) &/or industrial estates.
Industrial / enclosed	Industrial estates and some employment areas.
Small scale / Open	Small scale waste operations could be housed in industrial estates or redundant agricultural buildings; open windrow composting is most suited to rural locations (including potentially an existing greenfield site where strongly justified).
Waste Water Treatment Works (WwTW)	Given their operational requirements around the final discharge point etc WwTW may be appropriate in different contexts (including industrial estates).
Inert Landfill	Only as an integrated proposal on existing quarries, Minerals DD considered sites (ultimately subject to the site gaining MDD Preferred Site status for mineral extraction) or brownfield sites requiring restoration.
Non Hazardous Landfill	Only as an integrated proposal on existing quarries, Minerals DD considered sites (ultimately subject to the site gaining MDD Preferred Site status for mineral extraction)

Potential waste facility	Compatible land uses
Hazardous Landfill	Only as an integrated proposal on existing quarries, Minerals DD considered sites (ultimately subject to the site gaining MDD Preferred Site status for mineral extraction) or brownfield sites requiring restoration.

**8.18** The full description of the Stage 1 assessment methodology is set out in **Appendix D**, however full details on all suggested sites are provided in **Appendix E**. Each suggested site was assessed at Stage 1 depending on the generic facility groupings specified by the site promoters on the Call for Sites proforma.

- Energy from Waste - e.g. gasification, pyrolysis or combined heat and power;
- Industrial/ enclosed - e.g., materials recycling facilities, mechanical biological treatment facilities and transfer stations;
- Small scale/ enclosed - e.g., anaerobic digestion plants designed to treat the household biodegradable waste of a village;
- Open / unenclosed facilities - e.g., open windrow composting or C&D Recycling;
- Waste Water Treatment Works;
- Inert Landfill;
- Non-hazardous Landfill (e.g., municipal or commercial and industrial wastes);
- Hazardous landfill.

## Stage 2 Criteria

**8.19** The Stage 2 methodology covers key criteria which enable a comparative assessment to be made between the different types of proposals that were not excluded at Stage 1. It relies more heavily on professional judgement than Stage 1. The WPAs' suggestions for the Stage 2 selection criteria, and assumptions about how to score them, are set out in **Table 13** below. Each site was allocated a score under each of the headings in **Table 13**. This score was based on a traffic-light scoring system outlined in **Table 14** ranging from **Green** representing no impact, to **Red** which unless specified otherwise means that the impact / issue is so severe it could not be adequately mitigated.

**Table 13 Stage 2 Site Selection Criteria**

Issue	Criterion
Planning Background	Site History
	'Saved' Structure Plan Policies
	Land Allocation in relevant District or Borough Local Plan or LDF Document
	Planning History for the site and any incompatible land uses granted permission in proximity

Issue	Criterion
Proximity to Sensitive Uses  (Addresses potential amenity - noise, nuisance, odour and emissions)	Airport Safeguarding and Bird Strike Hazards areas
	Proximity to Homes, Hospitals, Schools and other sensitive uses
Hydro-geology	Risk of flooding and/or groundwater pollution to aquifers;
Landscape / Townscape Character	Landscape affect
	Visual Intrusion
Ecology and Designations	Proximity to wildlife sites
	Biodiversity Loss
	Fragmentation of habitat
Historic Environment	Affect upon Listed Buildings
	Impacts on below ground (archaeological) remains
Traffic and Transportation	Access Safety
	Capacity of Local Transport Infrastructure
	Amenity along highway route
Proximity to Key Centres for growth	Distance to nearest main settlement of Basildon, Chelmsford, Colchester, Harlow and Southend-on-Sea
Site Size (for Waste Management Facilities only)	Size of site compared to average for facility type proposed;
	Shape of site, which can affect the operational ability of the site.

**Table 14 Traffic Light Scoring System**

Colour	Description	Score
RED	The impact / issue is severe it can't be adequately mitigated	- 2
AMBER 3	There is a major impact / issue which may be acceptable (in most cases with substantial mitigation)	- 1
AMBER 2	There is a moderate impact / issue which may be acceptable (in most cases with mitigation)	0
AMBER 1	There is a minor impact / issue which may be acceptable (and may involve mitigation)	+ 1
GREEN	There is no ADVERSE impact(s) / issue(s) OR these are considered insignificant	+ 2

### Question 23

Site Selection Criteria

A) Do you agree with the suggested Site Selection Criteria?

Please explain your answer.

B) Are there any other criteria which can be considered?

Please explain your answer.

### The Site Selection Outcomes

#### Statement 2

IMPORTANT: The Status of the Preferred Sites identified in this document

Please be aware that the sites selected as 'Preferred Sites' at this Preferred Approach stage may not remain as 'Preferred Sites' when the final version of the plan emerges at the Submission stage. Similarly, sites currently rejected could later be included as 'Preferred Sites'. This is because new information could emerge in response to this consultation which would require changes to be made to the way sites are assessed, or to individual site scores.

It is only when there is an Adopted plan - that is, after the Submission version of the document has been through Examination in Public and the Council has agreed to any changes required by the independent Planning Inspector - that complete certainty in the choice of Preferred Sites can be given.

**8.20 Appendix E Preferred Sites and Non-selected Sites** provides the opportunity to comment on all the suggested sites proposals/sites which came forward in response to the **Waste I&O Call for Sites**. It is possible to comment on all the Preferred Sites identified in Preferred Approach 5, including the Safeguarded Preferred Sites for IWMF, which benefit from planning permission for IWMF; and the 6 Preferred Sites. It is also possible to comment on the suggested sites which have not been selected.

**8.21** A list of all the Proposals/Sites suggested for consideration and their status as Preferred or non selected sites (including the safeguarded IWMF Preferred Sites) is set out in Table 15 below. It is only the Preferred Sites set out in **Preferred Approach 5** that have gone forward in this WDD; the remainder of sites are identified as being non-selected sites.

**8.22** The Stage 2 non-selected proposals/sites, were not deemed necessary to be identified in this WDD as additional sites. No judgement is made on whether they are acceptable in planning terms, however the Site Assessment in **Appendix E** provides an opportunity to comment on them. The sites which “Failed Stage 1 are also non-selected and may also be commented upon.

**Table 15 Safeguarded Preferred Sites, Preferred and Non Selected Sites**

Site Ref No	Site/ Proposal Description	District
<b>Safeguarded Preferred Site (Selected) PA4 &amp; 5 (See Appendix F Section 2)</b>		
IWMF1	Stanway, Colchester Planning Permission COL/63/06/COL	COL
IWMF2	Rivenhall Airfield, Braintree, Planning Permissions ESS/37/08/BTE & ESS/38/06/BTE	BTE
IWMF3	Courtauld Road, Basildon, Planning Permission ESS/04/07/BAS	BAS
<b>Preferred Sites for In-vessel Composting (Selected) PA5 See Appendix F Section 3</b>		
W3	Basildon Waste Water Treatment Works (east)	BAS
W7	Sandon Quarry (east), Sandon	CHL
<b>Preferred Sites for Municipal Solid Waste Transfer (selected) PA5 Appendix F Section 3</b>		
W9	Hoblongs Industrial Estate, Great Dunmow	UTT
W10	Templefields, Harlow	HLW
W11	Springfield Depot, Chelmsford	CHL
W16	Eastern Avenue Depot, Southend-on-Sea	SBC
<b>Non Selected Sites<sup>(38)</sup></b>		

38 Non-selected” Inert Landfill sites have not yet been determined and may be suitable for acceptable – subject to final list of preferred minerals sites

Site Ref No	Site/ Proposal Description	District
<b>Safeguarded Preferred Site (Selected) PA4 &amp; 5 (See Appendix F Section 2)</b>		
Li1	Towerfield, Fingrinhoe Quarry, Fingringhoe	COL
Li2	Holmwood Farm, Fingringhoe Quarry, Fingringhoe	COL
Li3R	Tile Kiln, Sible Hedingham	BTE
Li4R	Shellow Cross, Roxwell	CHL
Li5	Wivenhoe Quarry, Wivenhoe	COL / TEN
Li6	Sandon Quarry, Sandon	CHL
Li7	Fiveways Fruit Farm, Stanway	COL
Li9	Tyndales, Danbury	CHL
Li10R	Blackleys Quarry, Gt Leighs,	CHL
Li11R	Blackleys, Quarry, Gt Leighs,	CHL
Li14R	Broadfields Farm, Rayne	BTE
Ln1R	Slough Farm, Martells Quarry, Ardleigh	TEN
Ln2R	Park Farm, Martells Quarry, Ardleigh	TEN
W1	Greenacres, Wormingford	COL
W2	Hallsford Bridge, Ongar	BRW
W5	Colchester Waste Water Treatment Works, Commerce Way, Colchester	COL
W6	Witham Waste Water Treatment Works, Witham	BTE
W7	Sandon Quarry, Sandon	CHL
W13	Wivenhoe Quarry	COL / TEN
<b>Failed Stage 1 (Non-Selected Sites)</b>		
Li8R	Armigers Farm, Thaxted	UTT
Li12R	Patch Park Farm, Abridge	EPF
Li13R	Wellwick, St Osyth	TEN
Ln3	Crumps Farm, Lt Canfield, Takeley	UTT
W3	Basildon Waste Water Treatments Works, Basildon (west & north)	BAS

Site Ref No	Site/ Proposal Description	District
<b>Safeguarded Preferred Site (Selected) PA4 &amp; 5 (See Appendix F Section 2)</b>		
W4	Chelmsford Waste Water Treatment Works, Brook End Road, Chelmsford	CHL
W8	Elsenham	UTT
W12	Ballast Quay, Fingringhoe Quarry, Fingringhoe	COL
W14	Alresford Quarry, Alresford	TEN
W15	Wellwick, St Osyth	TEN

**Key: IWMF: Safeguarded and Permitted IWMF Proposed as a Preferred Site; W: Waste Facilities; Li : Inert Landfill Sites & Ln : Non-Hazardous Landfill Sites, Li/Ln R: landfill with Inert waste /Aggregate Recycling**

**8.23** An A3 Summary Table of the Site Assessments for all the suggested sites is included at the rear of this document – Table 17. Sites are set out in order of Preferred Sites, Non Selected sites and the non-selected Stage 1 Fails which were not considered suitable.

**8.24** There are many areas you may wish to consider when drafting your consultation response on a specific site. The following headings may help to focus your comments on the sites, or you may wish to draw our attention to some other information about the sites which you believe should influence the assessment of that site:

- Planning Background;
- Proximity to Sensitive Uses;
- Hydro-geology;
- Landscape/Townscape Character & Visual Impact;
- Ecology & Designations;
- Historic Environment;
- Traffic and Transport;
- Proximity to Key Centres for Growth;
- Site Size.

**8.25** If you would like to make a site specific comment please go to **Appendix E** Preferred Site Allocations and Non Selected Sites <http://consult.essexcc.gov.uk>.

**8.26** If you would like to comment on the Preferred Strategy or on the general principle establishing no need to identifying other sites or the locational criteria, please refer to the relevant Preferred Approaches within **Chapters 4-6**.

## 9 IMPLEMENTATION, MONITORING AND REVIEW

**9.1** The Preferred Approaches set out in this document are based on the evidence available at the time of preparation. However, as the data that has informed its preparation changes and is updated over time, it will be necessary to monitor what is happening and to respond in the most appropriate way. Monitoring is important in order to assess the impact of policies and whether the WDD is delivering sustainable development so that the policies can be reviewed as appropriate.

**9.2** ECC is required to produce an Annual Monitoring Report (AMR) to review the progress of Local Development Documents against the milestones set out in the Local Development Scheme and to assess the extent to which the policies in the document are being achieved.

**9.3** A comprehensive suite of performance indicators and targets will be developed to help inform the monitoring process and will provide the basis for the AMR. These will integrate with national indicators and targets, applying more localised indicators and targets as appropriate. If national indicators change then the monitoring framework will be amended to adjust to the new indicators.

**9.4** **Table 16** sets out a proposed monitoring and implementation framework for the WDD. It sets out local performance indicators that could be used to monitor achievement of the Preferred Approaches. It also describes the key agents who need to be involved in the delivery of each Preferred Approach (e.g. private operators, landowners, neighbouring councils and government bodies) as well as the delivery mechanisms.

### Question 24

Do you agree with the proposed monitoring and implementation framework for the WDD?

Are there any other indicators that should be included?

**Table 16 WDD Proposed Monitoring and Implementation Framework**

Preferred Approach	Relevant objective(s)	Indicator	Target	Key Agents	Delivery Mechanisms
PA1: Waste Hierarchy PA2: Waste Prevention and Re-use	SO1, SO2, SO7	Amount of municipal, commercial, industrial and C&D waste diverted from landfill.	Municipal, commercial and industrial waste - 100% by 2031 C&D waste – 90% by 2031	Waste collection, disposal and planning authorities, waste operators, households and businesses.	Development management process (enforcement control, monitoring and planning applications).
		Amount of municipal waste recycled and composted.	65% by 2031		Municipal waste management strategies and community strategies.  Developer investment and government funding.  Developer investment and government funding.

Preferred Approach	Relevant objective(s)	Indicator	Target	Key Agents	Delivery Mechanisms
PA3: Overall Spatial Strategy	SO3	Amount of waste imported and exported for waste management purposes.	<p>Net self-sufficiency in waste management by 2031.</p> <p>A substantial reduction in the amount of waste from London that is disposed of in the Plan area.</p>	Essex and Southend-on-Sea Waste Planning Authorities, neighbouring WPA's, Greater London Authority, waste management industry.	Development management process (enforcement control, monitoring and planning applications). Monitoring of waste movements.
		Volume of waste accepted from London for management within the Plan area.	<p>Maximum quantities of municipal, commercial and industrial waste to be accepted from London by Essex and Southend-on-Sea for landfill is:</p> <p>256,000 t in 2010/11</p> <p>92,000 t in 2020/21</p> <p>13,000 t in 2030/31</p>		
PA4: Safeguarding and Waste Consultation Zone	SO4, SO8	Number of planning permissions for development within 250m of safeguarded sites granted contrary to advice from consultees.	Zero	Local planning authorities, Essex and Southend-on-Sea Waste Planning Authorities, waste	Development management process, consultation by local authorities with waste planning authorities on

Preferred Approach	Relevant objective(s)	Indicator	Target	Key Agents	Delivery Mechanisms
PA5: Strategic Site Allocations for Recycling and Recovery	SO2, SO5	Number of planning applications/permissions granted for MSW transfer stations at the allocated sites. Additional in-vessel composting capacity achieved through planning applications/permissions granted at the allocated sites.	Six permissions granted by 2031. At least one planning permission granted by 2031.	management industry. Essex and Southend-on-Sea Waste Planning Authorities, waste management industry.	planning applications. Development management process.
PA6: General Locational Criteria for Recycling and Recovery Facilities	SO2, SO8	Number of facilities of these types granted planning permission contrary to the identified locational criteria.	Zero	Essex and Southend-on-Sea Waste Planning Authorities.	Development management process
PA7: Locational criteria for Materials Recycling/Recovery Facilities and Waste Transfer Stations					
PA8: Locational criteria for Inert Waste Recycling Facilities					
PA9: Locational criteria for Metal Recycling and Vehicle Dismantling Facilities					

Preferred Approach	Relevant objective(s)	Indicator	Target	Key Agents	Delivery Mechanisms
PA10: Locational criteria for In-vessel Composting Facilities					
PA11: Locational criteria for Outdoor Composting Facilities					
PA12: Locational criteria for Waste Water Treatment Works					
PA13: Locational criteria for clinical waste treatment facilities					
PA14: Locational criteria for Mechanical Biological Treatment, Autoclaving and Anaerobic Digestion Facilities					
PA15: Locational criteria for Energy from Waste, Gasification and Pyrolysis Facilities					
PA16: Potential Strategic Site Allocations for Inert Landfill	SO5	Number of inert landfill proposals coming forward/permissions granted for inert landfill at preferred sites.	Dependent on number of sites eventually allocated.	Essex and Southend-on-Sea Waste Planning Authorities, waste	Development management process.

Preferred Approach	Relevant objective(s)	Indicator	Target	Key Agents	Delivery Mechanisms
PA17: Locational criteria for non-hazardous landfill facilities	SO8	Number of facilities of these types granted permission contrary to the identified locational criteria.	Zero	Essex and Southend-on-Sea Waste Planning Authorities,	Development management process
PA18: Locational criteria for hazardous landfill facilities					
PA19: Locational criteria for landraising					
PA20: Locational criteria for intermediate, low and very low level radioactive wastes					
PA21: Mitigating and Adapting to Climate Change	SO6	Number of planning permissions granted contrary to Environment Agency advice on flooding grounds.	None	Essex and Southend-on-Sea Waste Planning Authorities, Environment Agency, waste management industry and landowners.	Development management process.
	SO6, SO7	Additional energy from waste capacity achieved	1,071 ktpa by 2031	Essex and Southend-on-Sea Waste Planning	

Preferred Approach	Relevant objective(s)	Indicator	Target	Key Agents	Delivery Mechanisms
PA22: Transportation of waste	SO6	Number of planning permissions granted contrary to Highways Agency advice.  Reduction in road transportation to and from waste facilities.	Zero  No increase in waste-related HGV movements year on year	Authorities, waste management industry.  Highways Agency  Waste management industry.	Development management process.  Green travel plans, design and access statements, air quality surveys and transport assessments.
PA23: General Considerations for all Waste Management Development Proposals	SO8	Number of planning permissions granted contrary to advice from consultees on relevant issues.  Number of planning permissions imposing relevant conditions e.g. relating to biodiversity.	Zero  100%	Essex and Southend-on-Sea Waste Planning Authorities.  Essex and Southend-on-Sea Waste Planning Authorities.	Development management process.  Development management process.

## 10 HAVE WE MISSED ANYTHING?

**10.1** Under Regulation 25 of the new Town and Country Planning (Local Development) (England) (Amendment) Regulations 2008, the Waste Planning Authority is required to notify a wide range of specific and general consultation bodies, residents and those carrying on business in Essex of the subject of the plan being prepared, and invite representations about what the Waste Development Document ought to contain.

**10.2** This document encompasses our preferred approach to the Core Strategy, Development Management Policies and Site Allocations for waste management in the Plan area. However, there may be areas that have been missed, or matters not explained in sufficient detail.

### Question 25

Have we missed anything?

Are there any other matters you think should be considered in the WDD?

1. Yes

2. No

3. If Yes, please state what other matters should be included and provide reasons for your answer.

## Site Assessment Summary

Table 17 Site Assessment Summary

Site	Stage One Results	Stage Two Criteria									FACILITY SCORE	SITE SCORE (as proposed)	
		1 Planning Background	2 Proximity to Sensitive Uses	3 Hydro-Geology	4 Landscape / Townscape	5 Ecology & Designations	6 Historic Environment	7 Traffic & Transport	8 Proximity to Key Centres for Growth	9 Site Size (Not Considered for Landfill)			
<b>Preferred Sites for In-vessel Composting - PA5</b>													
W3	Basildon WWTW - East (1)	PROCEED	AMBER 1	GREEN	AMBER 1	GREEN	AMBER 1	AMBER 1	GREEN	GREEN	AMBER 2	12	12
W7	Sandon Quarry (East), Sandon	PROCEED	AMBER 1	AMBER 1	AMBER 1	GREEN	AMBER 2	AMBER 1	GREEN	GREEN	GREEN	12	12
<b>Preferred Sites for Municipal Solid Waste Transfer - PA5</b>													
W9	Hoblongs Ind. Est, Gt Dunmow	PROCEED	GREEN	AMBER 1	AMBER 1	AMBER 1	AMBER 1	GREEN	AMBER 2	AMBER 3	AMBER 1	8	8
W10	Templefields, Harlow	PROCEED	AMBER 1	AMBER 1	AMBER 1	GREEN	GREEN	GREEN	AMBER 2	GREEN	AMBER 1	12	12
W11	Springfield Depot, Chelmsford	PROCEED	AMBER 1	AMBER 2	AMBER 1	GREEN	GREEN	GREEN	AMBER 1	GREEN	AMBER 3	10	10
W16	Eastern Avenue, Southend-on-Sea	PROCEED	AMBER 1	AMBER 3	AMBER 1	GREEN	AMBER 1	AMBER 1	AMBER 1	GREEN	GREEN	10	10
<b>Non Selected Suggested Sites</b>													
Li1	Towerfield, Fingringhoe - Inert Landfill	PROCEED	AMBER 1	AMBER 2	AMBER 1	GREEN	AMBER 1	GREEN	GREEN	N/A	-	9	9
Li2	Holmwood Farm, Fingringhoe - Inert Landfill	PROCEED	AMBER 1	AMBER 2	AMBER 1	AMBER 3	AMBER 1	GREEN	GREEN	N/A	-	6	6
Li3R	Tile Kiln, Sible Hedingham - Inert Landfill	PROCEED	AMBER 1	AMBER 1	AMBER 1	GREEN	AMBER 1	AMBER 1	GREEN	AMBER 3	-	8	7
	Tile Kiln, Sible Hedingham - C&D Recycling					AMBER 3						-1	

Site		Stage One Results	Stage Two Criteria									FACILITY SCORE	SITE SCORE (as proposed)
			1 Planning Background	2 Proximity to Sensitive Uses	3 Hydro-Geology	4 Landscape / Townscape	5 Ecology & Designations	6 Historic Environment	7 Traffic & Transport	8 Proximity to Key Centres for Growth	9 Site Size (Not Considered for Landfill)		
Li4R	Shellow Cross, Roxwell/Willingale - Inert Landfill	PROCEED	AMBER 1	AMBER 2	AMBER 1	AMBER 3	AMBER 1	AMBER 3	AMBER 1	AMBER 1	-	3	1
	Shellow Cross, Roxwell/Willingale - C&D Recycling		AMBER 2			RED						-2	
Li5	Wivenhoe - Sunnymed & Heath Farm - Inert Landfill	PROCEED	AMBER 1	AMBER 2	AMBER 1	GREEN	AMBER 2	GREEN	AMBER 1	GREEN	-	9	9
Li6	Sandon - Inert Landfill	PROCEED	AMBER 1	AMBER 1	AMBER 3	AMBER 2	AMBER 3	AMBER 1	GREEN	GREEN	-	5	5
Li7	Fiveways Fruit Farm, Colchester Quarry - Inert Landfill	PROCEED	RED	AMBER 2	AMBER 1	GREEN	AMBER 2	AMBER 2	GREEN	GREEN	-	5	5
Li9	Tyndales, Danbury Inert Landfill	PROCEED	AMBER 1	AMBER 2	AMBER 1	RED	AMBER 1	AMBER 1	AMBER 2	AMBER 1	-	3	3
Li10R	Blackleys Quarry, Gt. Gt. Leighs - Inert Landfill	PROCEED	AMBER 1	AMBER 2	AMBER 1	AMBER 2	AMBER 1	AMBER 1	GREEN	AMBER 1	-	7	8
	Blackleys Quarry, Gt. Gt. Leighs - C&D Recycling					AMBER 1						1	
Li11R	Blackleys Quarry, Gt. Gt. Leighs - Inert Landfill	PROCEED	AMBER 1	AMBER 2	AMBER 1	GREEN	AMBER 1	AMBER 1	GREEN	AMBER 1	-	9	10
	Blackleys Quarry, Gt. Gt. Leighs - C&D Recycling					AMBER 1						1	
Li14R	Broadfield Farm, Rayne - Inert Landfill	PROCEED	AMBER 1	AMBER 2	AMBER 1	AMBER 3	AMBER 1	AMBER 1	AMBER 1	AMBER 2	-	4	3
	Broadfield Farm, Rayne - C&D Recycling					AMBER 3						-1	

Site		Stage One Results	Stage Two Criteria									FACILITY SCORE	SITE SCORE (as proposed)
			1 Planning Background	2 Proximity to Sensitive Uses	3 Hydro-Geology	4 Landscape / Townscape	5 Ecology & Designations	6 Historic Environment	7 Traffic & Transport	8 Proximity to Key Centres for Growth	9 Site Size (Not Considered for Landfill)		
Ln1R	Slough Farm, Martells Quarry - Non Haz Landfill	PROCEED	AMBER 3	AMBER 1	AMBER 1	AMBER 2	AMBER 1	AMBER 2	GREEN	GREEN	-	6	6
	Slough Farm, Martells Quarry - C&D Recycling					AMBER 2						0	
Ln2R	Park Farm, Martells Quarry - Non Haz Landfill	PROCEED	AMBER 1	AMBER 1	AMBER 1	AMBER 2	AMBER 1	AMBER 3	GREEN	GREEN	-	7	6
	Park Farm, Martells Quarry - C&D Recycling					AMBER 3						-1	
W1	Greenacres, Wormingford	PROCEED	AMBER 3	AMBER 1	AMBER 1	RED	AMBER 1	AMBER 2	AMBER 3	AMBER 1	GREEN	2	2
W2	Hallsford Bridge Ind. Est, Ongar	PROCEED	GREEN	AMBER 1	AMBER 1	AMBER 1	GREEN	GREEN	AMBER 3	AMBER 3	AMBER 3	6	6
W5	Colchester WWTW	PROCEED	AMBER 2	AMBER 2	AMBER 1	AMBER 1	AMBER 2	GREEN	GREEN	GREEN	GREEN	10	10
W6	Witham WWTW	PROCEED	AMBER 3	AMBER 1	AMBER 1	GREEN	AMBER 1	GREEN	AMBER 2	AMBER 3	AMBER 3	4	4
W13	Wivenhoe Quarry	PROCEED	GREEN	AMBER 2	AMBER 1	AMBER 1	AMBER 1	GREEN	AMBER 1	GREEN	GREEN	12	12
<b>Failed Stage 1 (Non-Selected Sites)</b>		<b>Stage One: Reasons for 'Fail' status</b>											
Li8R	Armigers Farm, Thaxted - Inert Landfill	FAIL	Access and highways issues.										
	Armigers Farm, Thaxted - C&D Recycling												
Li12R	Patch Park Farm, Abridge - Inert Landfill	FAIL	Significant Proportion within Flood Zone 3a and potential groundwater pollution risk.										
Li13R	Wellwick, St Osyth - Inert Landfill	FAIL	Restoration completed so proposal is effectively a landraise at a greenfield location.										

Site	Stage One Results	Stage Two Criteria									FACILITY SCORE	SITE SCORE (as proposed)	
		1 Planning Background	2 Proximity to Sensitive Uses	3 Hydro-Geology	4 Landscape / Townscape	5 Ecology & Designations	6 Historic Environment	7 Traffic & Transport	8 Proximity to Key Centres for Growth	9 Site Size (Not Considered for Landfill)			
Ln3	Crumps Farm, Takeley Non Haz Landfill	FAIL	Voidspace status undeliverable without planning permission or MDD. A proportion of site is also in Flood Zone 3a										
W3	Basildon WWTW - West (2)	FAIL	Classified as a Greenfield site.										
W3	Basildon WWTW - North (3)	FAIL	Site Size.										
W4	Chelmsford WWTW	FAIL	Located within Flood Zone 3b, incompatible use & unsuitable Highways access										
W8	Elsenham	FAIL	Classified as a Greenfield site										
W12	Ballast Quay, Fingringhoe	FAIL	Proximity to Natura 2000 site										
W14	Alresford Quarry	FAIL	Proximity to Natura 2000 site										
W15	Wellwick, St Osyth Waste Management	FAIL	Classified as a greenfield site										
<b>KEY</b>		<b>Please Note:</b>											
W	Waste Management Facilities	Criteria 9 of the Stage 2 Assessment (Site Size) is not assessed when considering potential landfill facilities, due to the different nature of these site types. This criteria is assessed for all other waste management facility types.											
Li	Inert Landfill Sites	<b>SCORING CRITERIA</b>		-2	-1	0	1	2					
Ln	Non-Hazardous Landfill Sites	The best possible score available for a landfill facility = 16											
R	Landfill with Inert waste / Aggregate Recycling	The best possible score available for a waste management site. = 18											



This document is published by

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