

The logo for 'place services' consists of the words 'place' and 'services' stacked vertically in a white, lowercase, sans-serif font, set against a solid blue square background.

**Essex County Council & Southend-on-Sea Borough Council
Replacement Waste Local Plan: Pre-Submission**

Sustainability Appraisal and Strategic Environmental Assessment

Environmental Report

February 2016

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Annex B: Baseline Information

Annex C: Sustainability Framework and Site Pro Forma

Annex D: Audit trail of alternatives explored through Sustainability Appraisal process

Annex E: Consultation Responses

Annex F: Quality Assurance Checklist

Glossary of Acronyms

ANGSt	Accessible Natural Greenspace Standard
AD	Anaerobic Digestion
ALC	Agricultural Land Classification
AONB	Areas of Outstanding Natural Beauty
AQMA	Air Quality Management Area
BAP	Biodiversity Action Plan
BARR	Buildings At Risk Register
CD&E	Construction, Demolition and Excavation Waste
CH&P	Combined Heat and Power
C&I	Commercial and Industrial wastes
CPZ	Countryside Protection Zone
CWS	County Wildlife Site
DCLG	Department for Communities and Local Government
DEFRA	Department for Environment, Food and Rural Affairs
DPD	Development Plan Document
EA	Environment Agency
EC	European Community
ECC	Essex County Council
EEC	European Economic Community
EHHER	Essex Historic Environment Record
ELV	End of Life Vehicle
EU	European Union
FZ	Flood Zone
GIS	Global Information System
GWh	Giga Watt per hour
ha	Hectare
HARR	Heritage at Risk (in Essex) Register
HEC	Historic Environment Characterisation
HRA	Habitats Regulations Assessment
kW	Kilo Watt
LCA	Landscape Character Areas
LDF	Local Development Framework
LNR	Local Nature Reserves
LoWS	Local Wildlife Sites
MGB	Metropolitan Green Belt
MLP	Minerals Local Plan
MRF	Materials Recycling Facility
MW	Mega Watt
NNR	National Nature Reserve

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NO2	Nitrogen Dioxide
NPPF	National Planning Policy Framework
ODPM	Office of the Deputy Prime Minister
PAS	Planning Advisory Service
PDL	Previously Developed Land
PM10	Particle Matter
PPS	Planning Policy Statement
PRoW	Public Right of Way
RCHW	Recycling Centres for Household Waste
RWLP	Replacement Waste Local Plan
SA	Sustainability Appraisal
SA/SEA	Sustainability Appraisal incorporating the Strategic Environmental Assessment
SAC	Special Areas for Conservation
SARS	Strategic Aggregate Recycling Site
SBC	Southend Borough Council
SEA	Strategic Environmental Assessment
SFRA	Strategic Flood Risk Assessments
SM	Scheduled Monuments
SPA	Special Protection Area
SPZ	Source Protection Zone
SSSI	Site of Special Scientific Interest
SuDS	Sustainable Drainage Systems
TPO	Tree Preservation Order
WCA	Waste Collection Authority
WDA	Waste Disposal Authority
WDD	Waste Development Document
WPA	Waste Planning Authority

1 Introduction

Essex County Council (ECC) and Southend-on-Sea Borough Council (SBC) commissioned Place Services to undertake an independent Sustainability Appraisal (SA) incorporating Strategic Environmental Assessment (SEA) on the Replacement Waste Local Plan: Pre-Submission 2016.

1.1 The Waste Local Plan: Pre-Submission 2016

SEA Directive requires: 'An outline of the contents and main objectives of the plan or programme, and of its relationship with other relevant plans and programmes.' Annex I (a)

As part of its work on the new Waste Local Plan, ECC and SBC as Waste Planning Authorities (WPAs) have prepared a Replacement Waste Local Plan Pre-Submission document for public consultation.

The Pre-Submission document builds on the WPAs' previous progress towards a Waste Development Document (WDD), incorporating a Core Strategy, Site Allocations and Development Management Policies, under the previous planning system. The change from a WDD to a WLP brings the document in line with current planning policy terminology, including revisions in approach to reflect new policy requirements, hence the need for a new consultation. The components of the plan are the same, and the WLP contains:

- Site allocations for waste management facilities
- Strategic Objectives and policy direction
- Development management policies

The Plan has been through a number of stages to get to this point. These are:

- WDD Issues and Options (2010)
- WDD Preferred Approach (2011)
- RWLP Revised Preferred Approach (2015)

All of these iterations of the Plan have been made available for consultation and have been accompanied by a Sustainability Appraisal.

1.2 Sustainability Appraisal / Strategic Environmental Assessment

The requirement for Sustainability Appraisal (SA) and Strategic Environmental Assessment (SEA) emanates from a high level national and international commitment to sustainable development. The most commonly used definition of sustainable development is that drawn up by the World Trade Commission on Environment and Development in 1987 which states that sustainable development is:

'development that meets the needs of the present without compromising the ability of future generations to meet their own needs.'

This definition is consistent with the themes of the NPPF, which draws upon The UK Sustainable Development Strategy Securing the Future's five 'guiding principles' of sustainable development: living within the planet's environmental limits; ensuring a strong, healthy and just society; achieving a sustainable economy; promoting good governance; and using sound science responsibly.

SEA originates from the European Directive 2001/42/EC "on the assessment of the effects of certain plans and programmes on the environment" (the 'SEA Directive') which came into force in 2001. It seeks to increase the level of protection for the environment; integrate environmental considerations into the preparation and adoption of plans and programmes; and promote sustainable development.

The Directive was transposed into English legislation in 2004 by the Environmental Assessment of Plans and Programmes Regulations (the 'SEA Regulation') which requires an SEA to be carried out for plans or programmes

'subject to preparation and/or adoption by an authority at national, regional or local level or which are prepared by an authority for adoption, through a legislative procedure by Parliament or Government, and required by legislative, regulatory or administrative provisions'.

This includes Local Plans. The aim of the SEA is to identify potentially significant environmental effects created as a result of the implementation of the plan or programme on issues such as *'biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationship between the above factors'* as specified in Annex 1(f) of the Directive.

SA examines the effects of proposed plans and programmes in a wider context, taking into account economic, social and environmental considerations in order to promote sustainable development. It is mandatory for Local Plans to undergo a Sustainability Appraisal in accordance with the Planning and Compulsory Purchase Act 2004 as amended by the Planning Act 2008, and in accordance with paragraph 165 of the NPPF.

Whilst the requirements to produce a SA and SEA are distinct, Government guidance considers that it is possible to satisfy the two requirements through a single approach providing that the requirements of the SEA Directive are met. This integrated appraisal process will hereafter be referred to as SA.

1.3 Background

The methodology adopted for the SA/SEA of the Waste Local Plan incorporates the requirements of SEA into the SA process and has been developed in accordance with the following guidance:

- The Plan Making Manual (PAS online guidance available at: www.pas.co.uk)
- Towards a more efficient and effective use of Strategic Environmental Assessment and Sustainability Appraisal in spatial planning (CLG, 2010);
- Local Development Frameworks – Guidance on Sustainability Appraisal, (PAS, 2007);
- Resource Manual to Support Application of the UNECE Protocol on Strategic Environmental Assessment (UNECE, April 2007 (revised February 2011); and
- A Practical Guide to the Strategic Environmental Assessment Directive, (ODPM, 2005).

The Sustainability Appraisal is an integral part of plan preparation and has five sequential stages. These main stages and the tasks for each stage are listed in Table 1.

Table 1: Stages in the SA Process and their purpose

Stage A: Setting the context and objectives, establishing the baseline and deciding on the scope
A1: Identifying other relevant policies, plans and programmes, and sustainability objectives
A2: Collecting baseline information
A3: Identifying sustainability issues and problems
A4: Developing the SA framework
A5: Consulting on the scope of the SA
Stage B: Developing and refining options and assessing effects
B1: Testing the plan objectives against the SA framework
B2: Developing the plan options
B3: Predicting the effects of the plan
B4: Evaluating the effects of the plan
B5: Considering ways of mitigating adverse effects and maximising beneficial effects
B6: Proposing measures to monitor the significant effects of implementing the plan
Stage C: Preparing the SA Report
C1: Preparing the SA Report
Stage D: Consulting on the plan and the SA Report
D1: Consulting on the plan and SA Report
D2(i): Appraising any significant changes
D2(ii): Appraising any significant changes following representation
D3: Making decisions and providing information
Stage E: Monitoring the significant effects of implementing the plan
E1: Finalising aims and methods for monitoring
E2: Responding to adverse effects

1.4 The Aim and Structure of this Report

This Environmental Report responds to Stages B and C of the Sustainability Appraisal process. The key element of the report is to develop and refine alternatives and assessing effects. This stage:

- Tests the local Plan objectives against the sustainability appraisal framework;
- Develops the Local Plan options including reasonable alternatives;
- Evaluates the likely effects of the Local Plan and alternatives;
- Considers ways of mitigating adverse effects and maximising beneficial effects; and
- Proposes measures to monitor the significant effects of implementing the Local Plan.

There are 6 annexes to this Environmental Report which contain the supporting evidence.

Annex A contains a review of relevant plans and programmes.

Annex B contains the baseline information.

Annex C contains the Sustainability Framework and Site Pro Forma.

Annex D sets out the audit trail of all alternatives explored since 2010 and throughout the Sustainability Appraisal process.

Annex E sets out any comments to consultation response sreceived relevant to the SA.0

Annex F sets out a Quality Assurance Checklist of the SA requirements.

2 Sustainability Context, Baseline and Objectives

2.1 Introduction

The following section outlines the key findings of the Scoping Report which includes an outline of the plans and programmes, the baseline information profile for the Plan Area, together with the Sustainability Objectives. Annex C accompanying this report sets out the detailed Sustainability Appraisal Framework and the Site Pro forma. It is worthy of note that the Site Pro forma sets out the methodology for the site assessments of the SA only, and is a separate assessment to those undertaken for the Waste Local Plan by consultants Land Use Consultants (LUC) on behalf of Essex County Council and Southend-on-Sea Borough Council as Waste Planning Authorities.

2.2 Plans and Programmes (Stage A1)

Local Plans must comply with existing policies, plans and programmes at national and regional levels and strengthen and support other local plans and strategies. It is therefore important to identify and review those policies, plans and programmes and Sustainability Objectives which are likely to influence the Plan at an early stage. The content of these plans and programmes can also assist in the identification of any conflicting content of plans and programmes in accumulation with the Waste Local Plan. Local supporting documents have also been included within this list as they will significantly shape policies and decisions in the Plan Area.

It is recognised that no list of plans or programmes can be definitive and as a result this report describes only the key documents which influence the Plan. Table 2 outlines the key documents, whilst a comprehensive description of these documents together with their relevance to the Plan is provided within Annex A.

Table 2: Key Documents

International / National Plans and Programmes
National Planning Policy Framework (Mar 2012)
National Planning Policy for Waste (2014)
The Environmental Assessment of Plans and Programmes Regulations 2004
The Public Services (Social Value) Act 2012
EU Landfill Directive
EU Waste Framework Directive
Infrastructure Bill 2014/15
Highways Act 1980
Flood and Water Management Act 2010
The Flood Risk Regulations 2009
Land Drainage Act 1991
Environmental Protection Act 1990
Water Framework Directive
EU Air Quality Directive 2008

Wildlife and Countryside Act 1981
Biodiversity 2020: A strategy for England's wildlife and ecosystem services (2011)
Countryside and Rights of Way Act 2000
Natural Environment White Paper (2011)
Active People Survey (Public Health England 2014)
The Public Health Outcomes Framework 2013-2016
The South East Local Enterprise Partnership Strategic Economic Plan
National Highways and Transportation survey (2013/14)
National Waste Management Plan for England 2013
Waste Prevention Programme for England
Accessible Natural Greenspace Standards (Natural England using 2008 baseline)
Council of Europe's European Landscape Convention 2000
Historic England Good Practice Advice notes
County (inc. Southend) Plans and Programmes
Updated Waste Capacity Gap Report 2016 (including Topic Paper 1: Waste Capacity Gap Update [2015])
ECC and Southend-on-Sea Borough Council Waste Local Plan (2001)
ECC Replacement Minerals Local Plan (2014)
Joint Health and Wellbeing Strategy for Essex 2013-2018
The Strategic Economic Plan for Essex 2015-2021
Local Transport Plan 2011
Speed Management Strategy (Mar 2010, with 2014 draft version)
Traffic Management Strategy (Mar 2005)
The Joint Municipal Waste Management Strategy for Essex 2007-2032
ECC SuDS Design and Adoption Guide (draft 2014)
Essex Local Flood Risk Management Strategy (Feb 2013)
Essex Surface Water Management Plans (Dec 2013)
Essex Rights of Way Improvement Plan (May 2009)
Essex Biodiversity Action Plan 2011
District / Borough plans and programmes
Local Plan Core Strategy Revised Preferred Options (2014) note – a Draft Local Plan (2016) due

to go out on public consultation at time of writing Basildon District Local Plan Saved Policies (Sep 2007)
Braintree District Council Local Plan Issues and Scoping document (2015), Braintree District Core Strategy (Sep 2011), Braintree District Council Local Plan Review (2005)
Brentwood Borough Council Local Development Plan (emerging), Adopted Brentwood Replacement Local Plan (Aug 2005) + Saved Policy Direction Aug 2008
Castle Point (new) Local Plan (emerging), Castle Point Local Plan Saved Policies (Sep 2007)
Chelmsford City Council Local Plan Issues and Options (2015), Chelmsford City Council Core Strategy and Development Control Policies (Focused Review 2013), Site Allocations Plan (2012), North Chelmsford Area Action Plan (2011)
Colchester Borough Council Local Plan (emerging), Colchester Local Plan Focused Review (2014)
Epping Forest Local Plan (emerging), Epping Forest Combined Local Plan (1998) and Alterations (2006) Policy Document (Feb 2008)
Harlow Local Plan 2031 (emerging), Adopted Replacement Harlow Local Plan (Jul 2006) + Saved Policy Direction (2009)
Maldon District Local Plan (emerging), Maldon District Rural Allocations Plan (emerging), Maldon District Replacement Local Plan And Saved Policies (Nov 2008)
Rochford District Allocations Plan (2014), Rochford District Core Strategy (2011)
Tendring Local Plan (emerging), Tendring District Local Plan (Dec 2007)
Uttlesford District Council Local Plan (emerging), Uttlesford Adopted Local Plan (Jan 2005), Saved Policy Direction (Dec 2007)
Southend-on-Sea Borough Council Core Strategy (2007), Southend-on-Sea Borough Council Development Management DPD – Revised Proposed Submission (2014), Southend-on-Sea Borough Council Southend Central Area Action Plan (SCAAP) DPD – Proposed Submission (2012)
Conservation Area Appraisals and Management Plans (District level, across the Plan Area)
Green Infrastructure Strategies (for Harlow, Southend, Caste Point, Basildon, Colchester and Tendring [at present])

2.3 Baseline Information (Stage A2)

Annex B details the complete Baseline Information profile for the Plan Area relevant to the content of the Plan.

The following section outlines a summary of the key baseline information and therefore the current state of the environment for the Plan Area.

2.3.1 Waste

- The Waste Local Plan must implement the waste hierarchy, in accordance with the Revised Waste Framework Directive. In practice, this means promoting waste prevention, material and energy recovery (e.g. direct re-use, recycling and treatment to make new objects) prior to disposal. If plentiful facilities for the processes at the top of the waste hierarchy are provided while fewer for the processes towards the bottom of the hierarchy, movement up the waste hierarchy may be achieved.

- Within Essex there are 21 RCHWs which are run by the local authority and allow the public to dispose of household and recyclable wastes, including green waste, glass and metal. In 2013-14, 137,280 tonnes of waste was collected in the civic amenity sites in Essex.
- For 2012/13, the WDA managed approximately 720,000 tonnes of waste. Of this, approximately 30.9% was dry recycling (eg paper and plastics), a total organic element of 21.6% and the remaining 47.5% was residual waste. The organic element consists of 87,000 tonnes of source segregated green waste, 23,000 tonnes of source segregated food waste and 56,000 tonnes of mixed food and garden waste directly from households.
- In Essex and Southend, 368,663 tonnes which accounts for 46% of the total household waste was sent to landfill in 2014/15. The Plan Area recycled and composted a total of 385,193 tonnes of household waste which accounts for 48.1% of total waste. ECC has an aspiration to achieve a 60% recycling rate by 2020.
- Six transfer facilities have been granted planning permission within Essex and Southend, to support the Courtauld Road materials recovery facility, in Basildon. These are all operational and accept waste from the Waste Collection Authority vehicles directly from kerbside collection. Here waste will be bulked up, ready for transportation to Courtauld Road. There is a total transfer capacity of just over 428 thousand tonnes per annum. The Waste Capacity Gap Report supporting the WLP considers that there is no further need for LACW transfer capacity during the plan period.
- There are few biological treatment sites within the plan area, with a corresponding small capacity.
- In 2014 there were few facilities that managed organic waste arising. However, the limited number of facilities is distributed throughout the plan area. The facilities tend to be located on the urban fringe, and/or on or near the main transport routes.
- At present, there are no energy recovery facilities either operational or under construction. There is however, one that has planning permission but is not yet under construction, namely Rivenhall II Combined Heat and Power (estimated to have a capacity of 297,000tpa, but this will be from the residual waste already managed within the IWMF so would not divert further arisings from landfill).
- In line with the predictions of waste management capacity higher up the waste hierarchy, even if no further permissions are granted, there would be a surplus of non-hazardous landfill capacity at 2031/32, if all permissions that have secured planning permission become operational.
- The National Waste Management Plan (2013) confirms that the Construction, Demolition and Excavation Waste (CD&E) waste stream is the largest contributing sector to the total amount of waste arising nationally. This is echoed within the plan area as between 2009 to 2012, an average of 43% of total waste arisings within the plan area are within the CD&E waste stream. However, forecasting continues to be problematic due to the lack of information on arisings and management facilities nationally and locally.
- As of 2014 there were a total of three inert landfills with planning permission within the plan area currently operating and a further facility where prior extraction had commenced although had not yet started accepting waste.
- It can be seen that in 2014 there was a relatively small amount of dedicated inert landfill space currently in operation within the plan area totalling approximately 755 cubic metres. This is significantly increased where the capacity within the facility at Highwoods is considered, bringing the total capacity to approximately 2.55 million cubic metres.
- There is a deficit of inert (CD&E) waste recycling capacity when compared with the estimated plan area arisings. The outlook changes when the estimated amount of inert

(CD&E) waste imported from London is added to the potential plan area arisings.

- In 2012 there were 48 facilities (not including the now closed facility at Roxwell) operating in the Plan Area to manage hazardous waste, which processed a total of 37,535 tonnes.
- Regarding Nuclear Waste, the future of the Drigg facility (in Cumbria) continues to be uncertain. It is likely (in the early stages of the plan period) that this facility will continue to accept High Level Radioactive Waste, but its life is limited as it is reaching full capacity. However, the long-term solution for the management of this type of waste is being considered at a national level by the Government. The Waste Local Plan will need to be flexible enough to accommodate the outcomes of this national debate and any implications of net self-sufficiency.
- The main contributor of nuclear waste remains the Nuclear Decommissioning Authority (NDA), who is undertaking the decommissioning process at Bradwell Nuclear Power Station. The Government's National Policy Statement (NPS) for Nuclear Power Generation is considering the Bradwell-on-Sea site, alongside seven other sites nationally, for future nuclear energy development. If the Bradwell-on-Sea 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 ultimately depends upon the progress of the GDF and would need to be considered in the context of future national policy. Given the formative status of this process any potential waste arisings cannot be planned for at this stage. Such a new nuclear power station would be considered an NSIP and therefore outside of the remit of the Waste Local Plan.

2.3.2 Minerals

- It is important to note that there is a significant crossover between the Minerals Local Plan (MLP, 2014) and the Waste Local Plan (WLP) in relation to CD&E waste recycling. The MLP is looking to increase capacity and quality of the recovered/recycled aggregate, to promote its increased use, while the WLP is looking to reduce the amount of waste being disposed of in landfill.
- Essex has extensive deposits of sand and gravel.
- There are more localised deposits of silica sand, chalk, brickearth and brick clay.
- Essex is the largest producer and consumer of sand & gravel in the East of England. As per the latest Local Aggregate Assessment, there are 20 permitted sand & gravel sites, one silica sand site, two brick clay and one chalk site.
- There is a single marine wharf and three rail depots capable of handling aggregate.
- Aggregate is both imported into Essex (hard rock, and sand and gravel) and exported (sand and gravel, primarily to London).
- The MLP has accepted there is likely to be the need for at least a further Strategic Aggregate Recycling Site (of at least 100 thousand tonnes capacity per annum) in the west of the county to serve the Harlow area. This area has high levels of development and is not close to an operating or preferred primary extraction site (as proposed within the MLP) or existing Strategic Aggregate Recycling Site.
- It is important to highlight that permissions for strategic and non-strategic aggregate recycling facilities will expire when the mineral and/or landfill activity ceases to operate. There is a significant CD&E recycling capacity at Pitsea permitted solely for the restoration of the landfill facility, with some of the material being imported by barge. Whilst this capacity is over the 100,000tpa threshold required for a site to be categorised as a Strategic Aggregate Recycling Site (SARS), it does not meet all of the other criteria required for this

designation.

- The sand and gravel resources in Essex are significant in national, sub-national and local terms - Essex is one of the largest producers in the UK; most geographically extensive and significantly mixed within the centre and north of Essex – namely the districts of Uttlesford, Braintree, Chelmsford, Colchester and Tendring; least extensive in south east Essex where deposits appear smallest and least workable, such as in the districts of Maldon and Rochford; and are present along the River Lea valley terraces adjoining Harlow and Epping Forest districts.
- The majority of the sand and gravel produced in Essex (about 78%) is used within the County itself. This position looks unlikely to change over the long-term.

2.3.3 Biodiversity

- Ramsar sites are wetlands of international importance designated under the Ramsar Convention which have a high degree of protection. They often incorporate Special Protection Areas (SPAs) and Special Areas for Conservation (SACs). In the Plan Area there are 11 Ramsar sites which include Hamford Water, parts of the Colne and Blackwater estuaries, and the Dengie Marshes which include coastal areas, estuaries, rivers and lakes/reservoirs.
- There are 10 SPA sites in the Plan Area and these match the Ramsar sites. SACs are sites of international importance designated under the EC Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora (the Habitats Directive). There are 2 SAC areas in the Plan Area; a large coastal area known as Essex Estuaries stretching from Shoeburyness to Jaywick Sands; and Epping Forest.
- Sites of Special Scientific Interest (SSSIs) are designated areas of land which are considered to be of special interest due to their fauna, flora, and geological and/or physiographical features. There are over 4,000 SSSIs in England. In the Plan Area there are 86 SSSIs covering 37,460.17 ha, the largest proportion of which are along the coastline.
- The condition of SSSIs within the Plan Area is reasonable. A total of 97.38% of SSSIs in the Plan Area are meeting the PSA target of qualifying as favourable or unfavourable recovering and 51.25% of SSSIs are deemed favourable by Natural England.
- There are seven NNRs located in the Plan Area and they are Blackwater Estuary, Colne Estuary, Dengie, Hales Wood, Hamford Water, Hatfield Forest and Leigh as shown in Figure 7.
- LNRs are designated by local authorities in conjunction with Natural England in recognition of their high interest in the local context for their wildlife or wildlife education value; or because they offer an important area for informal enjoyment of nature by the public. There are currently 50 LNRs in the Plan Area as shown in Figure 7 along with the designated NNRs.
- Ancient woodlands are wooded areas having been in continuous existence since 1600 AD. Ancient Woodlands in the Plan Area cover approximately 12,800ha. or 3.5% of the County and include Epping Forest, clusters in the north-west (e.g. Oxlip woodlands), south-east (e.g. Hockley Woods) and heathland and woodlands on the Danbury ridge.
- The amount of wooded area has diminished considerably in the Plan Area over time. Three quarters has been lost since the 11th Century. The total wooded area is now 5.7% and this is fragmented and scattered across the Plan Area.
- Local Wildlife Sites and support both locally and nationally threatened wildlife species and

habitats. In the Plan Area there are more than 1600 LoWS in Essex and together with statutorily protected areas they represent the minimum habitat to maintain current levels of wildlife.

2.3.4 Landscapes

- Within the Plan Area's landscape there are many areas of special interest which have been designated and protected from inappropriate development. The main areas of importance are (statutory landscape designations) Landscape Character Areas (LCAs), Areas of Outstanding Natural Beauty (AONBs), the Metropolitan Green Belt (MGB), Protected Lanes and Special Verges.
- The Essex Landscape Character Assessment (Chris Blandford Associates, 2003) is based on the Countryside Agency's guidance, and establishes a 'baseline' of the existing character of the Essex landscape. The assessment involved a broad review of the landscape identifying 35 'Landscape Character Areas' within Essex. They are areas with a recognisable pattern of landscape characteristics, both physical and experiential, that combine to create a distinct sense of place.
- There are 33 Areas of Outstanding Natural Beauty (AONBs) in England covering approximately 18% of the country, which have been designated protection under the Countryside and Rights of Way Act 2000. In the Plan Area there is one AONB, Dedham Vale, which lies on the border of Suffolk and Essex covering an area of 90 sq km. It has been designated such because it is an exceptional example of a lowland river valley.
- The largest green belt within the UK is the Metropolitan Green Belt around London which includes a large area of land in the Plan Area. It is protected by planning policies within Local Plans which enforce restrictions on certain development within the designated area. There are five purposes of including land in Green Belts. They are to check the unrestricted sprawl of large built-up areas; to prevent neighbouring towns from merging into one another; to assist in safeguarding the countryside from encroachment; to preserve the setting and special character of historic towns; and to assist in urban regeneration, by encouraging the recycling of derelict and other urban land.
- There are 9 local authorities in the Plan Area that have land classified as being within the Metropolitan Green Belt. The amount of land designated as Green Belt in Basildon has reduced slightly since 2012 estimates, as has the amount of designated land in Rochford. Castle Point's estimated Green Belt land has increased from 2,740 hectares in 2012 to 2,760 in 2015.
- Protected lanes have significant historic and landscape values. They generally originate from pre-historic track ways, which have been in continual (if lighter) use since. Protected lanes are often narrow, sunken and enclosed by a combination of mixed deciduous hedges and mature trees, ditches and raised verges that can be indications of great age. The volume weights and speed of traffic is often limited to preserve the special character and due to their age and use they also have great biological value.
- With this in mind, in the 1970s, Essex County Council Highways Agency, Nature Conservancy Council and Essex Wildlife Trust identified a number of important verges which were subsequently designated as Special Roadside Nature Reserves. They aim to protect the future of rare and uncommon flowers growing on them. There are over 100 special verges designated in the Plan Area.
- Roadside Verges are important and if sensitively managed they can increase the biodiversity of the verges themselves and from that the surrounding countryside. The reason for this is that verges can act as corridors interlinking fragmented or isolated

habitats.

- In the Plan Area, approximately 75% of the land area is considered agricultural land and over half of this is of high grade soils.
- There are significant areas of Grade 1 agricultural land within Tendring and Rochford Districts, and smaller areas within Maldon District and Colchester Borough.

2.3.5 Population and Social

- The Plan Area's population has been projected to increase (ONS, 2014) by 7.11% from 2012 to 2021. The highest increases in populations are forecast to be in Colchester Borough, Uttlesford District and Tendring District.
- When compared to regional and national figures the Plan Area has a similar percentage of the population who are of working age. This is despite the Plan Area having a slightly larger percentage population of over 65 than regionally and nationally and also a smaller proportion of people aged 16-24.
- Essex is scheduled to have a larger percentage population increase between 2012 and 2021 than regionally and nationally. On a district level, the largest percentage increases are projected for Colchester, Uttlesford, Tendring and Epping Forest, showing a broad geographical spread to the east and west of the Plan Area. Southend-on-Sea has the lowest population projected increase between 2012 and 2021 of all the districts and boroughs in the Plan Area.
- The most significant comparative increase in household projections is in the east of the Plan Area.
- The household projections are predicted to increase significantly within the WLP plan period for all districts and boroughs within the Plan Area.

2.3.6 Air Quality and Noise

- Poor air quality and noise can have associated health impacts. It will be the role of the Waste Local Plan to mitigate any of these impacts that may be associated with waste facilities and waste management throughout the Plan Area.
- Air quality in Essex is generally good. Most industrial processes in Essex are concentrated along the Thames Estuary. The air quality in Essex is influenced by its close proximity to mainland Europe. There are currently 15 Air Quality Management Areas within the Plan Area.
- All of the aforementioned AQMAs in the Plan Area have been designated as such due to elevated levels of Nitrogen Dioxide (NO₂). Brentwood has the highest number of designated AQMAs with five of these located along the A12.
- The overall air pollution index for a site or region is calculated from the highest concentration of five pollutants which are Nitrogen Dioxide, Sulphur Dioxide, Ozone, Carbon Monoxide and Particles < 10µm (PM₁₀).
- The levels of air pollution are similar in both rural and urban areas. All sites monitored have seen a significant fluctuation in results with an eventual reduction in 2014, with the exception of Thurrock.
- Ambient or environmental noise is defined as noise which is either unwanted or harmful. It is created by human activities and includes noise emitted by transport including road, rail and air traffic, as well as from sites of industrial activity. Mapping of ambient noise in England was carried out during 2006-07 in line with the Government's work to implement

the EU's Environmental Noise Directive DEFRA has now completed a second round of noise mapping in 2012, although this data is yet to be published.

2.3.7 Climatic Factors

- In the Plan Area the largest proportion of energy consumption in 2013 was within the domestic sector which accounted for 44.6% of the total energy consumed, followed by the industrial and commercial sector which consumed 28.0%. In contrast, the East of England region consumed the greatest proportion of energy within the transport sector (36.6%) followed by the domestic sector (33.4%) and finally the transport sector (30.0%).
- Epping Forest District consumed the greatest total amount of energy at 3,838.8GWh, of which 2,125.8GWh was consumed in the transport sector, the largest amount compared to the other local authorities in Essex. Basildon consumed the largest amount of energy within the industry and commercial sector at 904.6GWh and Southend-on-Sea registered 1,359.2GWh for domestic sector consumption, which was higher than any other local authority area.
- There have been reductions on the average energy consumption on all roads in the Plan Area. Similar reductions are apparent on the majority of roads throughout all districts with the exception of the M25 at Brentwood and the M11 at Harlow, A roads in Basildon, Maldon and Uttlesford and minor roads in Colchester and Maldon.
- The Plan Area achieved a 9.0% per capita reduction in CO2 emissions between 2010 and 2013 which was slightly below the East of England average of 9.5%. All authorities achieved an overall reduction in CO2 emissions but each did see a slight increase in emissions from 2011 to 2012 with the exception of Uttlesford. Harlow saw the greatest reduction in CO2 emissions of 12.7%, followed by Uttlesford at 11.2%. The lowest reduction was in Chelmsford at 6.1%.
- There are currently no completed onshore wind projects capable of generating 50kW of energy within the Plan Area.
- Within the Plan Area there are 19 renewable energy schemes either built or in the planning system. These combine to produce a maximum total of 105.75 MW, with the energy generating capacity for two further biomass facilities and a solar farm yet to be accounted for.

2.3.8 Transport

- Essex has a large rural area, similar in size to Suffolk, whilst also being the site of key international gateways such as Stansted and Harwich. The County also has major national routes including the M25 and the M11 running through it. As a result the transport demands faced by the County are uniquely complex.
- There are persistent network efficiency issues especially on a number of strategic inter-urban routes which are operating at or near to capacity. The Government-managed A12 and M25 and M11 have widely recognised issues with poor reliability and delays. Congestion is common on specific sections of the Council-managed network, including sections of the A127, A130 and A414.
- There are two distinct types of imports and exports concerning waste, firstly the localised cross boundary movement of waste and the long distance waste travel.
- The localised cross boundary movements of waste usually occur between adjacent waste planning authorities because the closest waste facility for the arisings is just over the

authority boundary.

- Conversely, long distance waste travel can occur, if larger or specialist facilities are required for that waste type. Examples of this include nuclear waste historically being sent to the facility in Cumbria, and a specialist newspaper recycling facility at Aylesford, Kent.
- Due to the proximity of the Greater London region to the Plan Area, there has been the historic situation where Essex and Southend accept London's waste for management. This includes all three main waste streams, non-hazardous, construction, demolition and excavation and hazardous wastes.
- CD&E (inert) and non-hazardous waste are the predominant waste types imported to the Plan Area from Greater London with on average only 0.4% of all the waste imported being classed as hazardous. The proportions of non-hazardous and CD&E waste varies year to year, but between 2009 to 2012 on average 44% of the total imported waste was CD&E, whilst 55.6% of the total was non-hazardous.

2.3.9 Water

- Water policy in England aims to protect both public health and the environment by maintaining and improving the quality of water. In addition to the ever increasing demand from human uses, water contributes to the natural environment and is an influential factor in the protection of wildlife species and sites, especially wetlands and estuaries.
- The main rivers in the Plan Area are the Stour, Colne, Pant/Blackwater, Chelmer, Mardyke Crouch, Roach, Asheldham Brook, Lee, Roding, Stort. Essex is bounded by the River Thames to the South of the County. As well as surface water resources the north of Essex has Chalk, Crag and Drift aquifers. The majority of Essex has a very low contamination vulnerability rating. It is only in the northern part of the county that has a higher vulnerability because of the porosity of the underlying chalk.
- In addition, to natural water bodies there are various artificial water bodies in the county. Hanningfield and Abberton are Essex's largest inland water resources.
- Water management is challenging in the Plan Area given the combination of high development growth and it being one of the driest counties in England. Annual rainfall in the Plan Area is only 65% of the average in England and Wales. In respect of water quantity in Essex; a significant portion of the resource is considered to be 'water stressed'; the resource availability status of rivers and aquifers show that they are generally over abstracted; and Essex is not self-sufficient in relation to local sources of water supply and needs to import substantial quantities of water to satisfy existing demand.
- The Plan Area falls within both the Anglian River Basin District and the Thames River Basin District. The Anglian River Basin District has 125 river water bodies and 5 lakes in the catchment whereas the Thames River Basin District has 483 river water bodies and 76 lakes. About 30 per cent of rivers and lakes in both basin districts currently achieve at least good biological status.

2.3.10 Flooding

- Although flooding cannot be completely prevented, its impacts can be avoided and reduced through effective planning and land management. In the Plan Area, all local authorities have completed Strategic Flood Risk Assessments (SFRAs) in order to identify and manage catchment wide flooding issues within their area as part of the planning process. The county council has also produced SFRA for Minerals and Waste planning and a Preliminary Flood Risk Assessment as part of the requirements of the Flood Risk

Regulations (2009). Data compiled on this subject is useful to identify whether broad potential future locations for development represent the most appropriate choices.

- The National Planning Policy Framework seeks to avoid inappropriate development in areas at risk of flooding, but where development is necessary, to ensure that it is safe and does not increase flood risk elsewhere.
- Surface water flood risk is relatively high in Essex with all main settlements assessed being ranked in the top 1,000 settlements most susceptible to surface water flooding. The Preliminary Flood Risk Assessment for Essex (January 2011) suggests that “there are around 27,000 properties at risk of surface water flooding (from a 1 in 200 year event) in the main settlements of Essex alone”.
- Significant levels of flood risk have been identified along the Essex coast and inland along river stretches. Essex Trends 2011 states “While advances in flood protection have been made since the early 1950s the danger of coastal flooding remains significant, particularly as climate change increases the chance of storms and high tides coinciding. Government projections suggest that the number of people in the UK at risk of flooding could more than double by 2080. The resilience of our communities in these areas must be strengthened, and our populations must plan and adapt their behaviour to prepare for these possible events.”
- Large areas of Southend are susceptible to both fluvial and tidal flooding. As a high density part of the Plan Area, certain potential waste management sites would not be suitable in these locations.

2.3.11 Cultural Heritage and Townscape

- The historic environment should be effectively protected and valued for its own sake, as an irreplaceable record which contributes to our understanding of both the present and the past.
- Historic Environment Characterisation (HEC) is an approach to characterisation which integrates the three main strands which make up the historic environment; historic buildings, historic landscape (urban and rural) and below ground archaeological remains. HEC is a means of incorporating the historic environment into spatial planning particularly at a strategic level, usually used at a sub-regional, county or district level. It is particularly useful since it provides an overview of the historic environment in its entirety, rather than just one aspect such as historic landscape.
- There are over 398,000 listed buildings or groups of buildings in England (English Heritage, August 2015) and 14,300 in Essex (The National Heritage List for England, English Heritage, 2015).
- The majority of listed buildings in the Plan Area are grade II listed. There are 272 listed buildings of exceptional interest (grade I) and 762 which are particularly important buildings of more than special interest (grade II*).
- There is a fairly even distribution of listed buildings within the Plan Area; however there is a greater concentration to the north particularly in the districts of Uttlesford and Braintree and also around historic towns such as Colchester.
- The Heritage at Risk in Essex Register (HARR) contains details of heritage assets known to be ‘at risk’ through neglect and decay, or vulnerable of becoming so. Although the main focus remains on buildings, the whole of the historic environment is now encompassed in the register. The objective of the register is to highlight the plight of heritage assets which are at risk, and initiate action towards securing their long term conservation.

- The Register shows that the annual number of heritage assets deemed ‘at risk’ and ‘newly at risk’ in the Plan Area has increased slightly over the last two years with 227 in 2011 and 228 in 2013. There has been a significant decrease since 2010 however, when this figure totalled 262.
- Of the 212 heritage assets currently at risk, 37 of them are within the Borough of Colchester, which is the highest amount of all the Essex districts while Castle Point Borough has only 1 heritage asset at risk.
- As with rest of the UK, it is true to say that the majority of archaeological sites and deposits in Essex remain buried, hidden and thus preserved. However, the known archaeological resource in the county is very varied and highly significant. There are approximately 37,240 records of archaeological sites and finds, recorded on the Essex Historic Environment Record (EHER) for the county.
- Scheduled Monuments (SMs) are sites of national importance and protected by the Ancient Monuments and Archaeological Areas Act 1979. The purpose of designating SMs is to preserve the monument for the future and protect it from damage, destruction or any unnecessary interference. Throughout the Plan Area there 304 (298 in Essex and 6 in Southend), ranging from prehistoric burial mounds to unusual examples of World War II and Cold War defensive structures.
- Conservation Areas are defined as historical town centres and buildings having ‘special architectural or historical interest, the character of which is desirable to preserve or enhance’ which are protected under the Listed Buildings and Conservations Areas Act (1990). The objective of the Conservation Area designation is to ensure that the character of the defined area is preserved from developments which do not preserve or enhance its character. The Plan Area currently has 228 designated Conservation Areas. These are separated into local authority level in the following table and the specific locations of these are shown in the following figure.
- Registered Parks and Gardens are designated by English Heritage and defined as “a park or garden of special historic interest”. They are graded I (highest quality), II* or II. There are currently 38 historic parks and gardens in Essex and 0 in Southend.
- Essex has one of only 46 Registered Battlefield sites in England. It is the oldest battlefield on the register and is the site of the Battle of Maldon, between the Saxons and the Vikings, in 991 AD located on Northey Island in the Blackwater Estuary.

2.3.12 Economy

- The percentage of Essex’s population that are economically active at 80.3% is higher than the national average and slightly higher than the regional average. Southend at 77.9% is more in line with the national average. The percentage of Essex residents in employment is also higher than the national average but is slightly below the average for the East of England. The Southend average again is similar to the national average.
- The largest proportion of people across all geographical areas work in the ‘Services’ industry. A smaller proportion of people are employed in the sector in Essex than the East of England, and this figure is further below the national average of 85.6%. Southend with an average of 88.2% is higher than the national average.
- The above table has split employment into 5 main categories, namely ‘Primary Services’, ‘Energy and Water’, ‘Manufacturing’, ‘Construction’ and ‘Services’. Essex can be seen to have an above average proportion of people employed in the ‘Construction’ and ‘Transport’ sectors and a deficit in ‘Finance, IT and other business activities’ and ‘Services’ sectors.

2.3.13 Housing

- The latest population trend data shows that the population in the Plan Area is growing annually. This has important implications for the management of waste, and the requirement for new waste management facilities.
- The total number of net additional dwellings in the Plan Area for 2007 to 2015 was 32,940. Chelmsford Borough and Colchester Borough recorded the highest number for 2014/15 of 830 and 730 buildings respectively. The number of additional dwellings in Colchester and Basildon over this period accounted for approximately 33% of the total number of new dwellings added in the Plan Area.
- Many of the local authorities in Essex are currently developing their Local Plans and accompanying evidence base so future projections are not yet available. It is therefore not possible to gain an accurate account of future housing supply across the county.
- As of 2014, there was a total dwelling stock within Essex County of 659,180. This has significant implications on waste management and the capacities of various waste management facilities in the Plan Area.

2.3.14 Data Limitations

Not all the relevant information was available for the Plan Area or at the relevant level and as a result there are some gaps within the data set. It is believed however that the available information shows a comprehensive view on sustainability within the Plan Area. New data that becomes available will be incorporated in the SA appraisal.

It should be noted that while the baseline will be continually updated throughout the SA/SEA process, the information outlined within this report represents a snapshot of the information available at the beginning of February 2015.

2.4 Key Sustainability Issues and Problems and Sustainability Objectives (Stage A3)

The outcome of Stages A1 – A2 in the SA Process is the identification of key sustainability issues and problems facing the Plan Area which assist in the finalisation of a set of relevant Sustainability Objectives which would set the framework for the appraisal of the Plan during its preparation. The sustainability objectives are also derived from the review of plans and programmes and a strategic analysis of the baseline information.

The appraisal will then be able to evaluate, in a clear and consistent manner, the nature and degree of impact and whether significant effects are likely to emerge from the Plan's proposed policies. The following table outlines the stages which led to the formulation of the Sustainability Objectives, which were based on the key issues for the Plan Area.

Table 3: Key Sustainability Issues and Problems

Key Issues	Description / Supporting Evidence	State of environment in absence of the Plan	Sustainability Objective (SO)
Protecting international biodiversity designations	There are 10 SPA sites in the Plan Area (also Ramsar sites) which include Hamford Water, parts of the Colne and Blackwater estuaries, and the Dengie Marshes which cover approximately 30,524 ha and include coastal areas, estuaries, rivers and lakes/reservoirs.	Although biodiversity and ecological designations are protected internationally and nationally, allocating sites and devising policy criteria in a locally relevant plan-led system enables input by ecology specialists on a site-by-site basis and the best outcomes in light of all alternatives. Without factor in these designations, and general biodiversity concerns, the Plan could lead to inappropriate site allocations and policies that do not reflect the situation.	1) To protect and enhance biodiversity and geological diversity throughout Essex and Southend.
	There are 2 SAC areas in the Plan Area; a large coastal area known as Essex Estuaries stretching from Shoeburyness to Jaywick Sands; and Epping Forest.		
Protecting UK based and local biodiversity designations	In the Plan Area there are 81 SSSIs covering a total of 36,322 ha.		
	There are 7 National Nature Reserves (NNRs) located in the Plan Area.		
	There are currently 48 LNRs in the Plan Area.		
	Ancient Woodlands in the Plan Area cover approximately 12,800ha. or 3.5% of the County		
In the Plan Area there are more than 1,440 LoWS covering over 13,000ha and together with statutorily protected areas they represent the minimum habitat to maintain current levels of wildlife.			

Key Issues	Description / Supporting Evidence	State of environment in absence of the Plan	Sustainability Objective (SO)
Ensuring policy exists that protects water quality	<p>Surface water drainage can pollute waters; particularly petrol, oil, grease and metals from vehicles associated with the management of ELV facilities and landfill leachate.</p>	<p>Without the Plan's policy direction, it is possible that permissions are granted without suitable conditions. Water quality issues such as these are often tackled through initiatives on sustainable drainage systems. Without exploring flooding as a site assessment criteria and policy requirement, the Plan could exacerbate flooding issues through inappropriate development.</p>	2) To maintain and enhance water quality and resources.
	<p>Adherence to the measures in the Water Framework Directive to achieve good qualitative and quantitative status of all water bodies.</p>	<p>The plan will set the policy direction of what is acceptable in terms of waste management and those of facilities. The allocation of sites will also look at water related criteria; particularly relevant considering the range of water bodies in the Plan Area, including coastal waters and numerous estuaries. The nature of waste management can lead to a deterioration of water quality. Without this being an important consideration in the assessment of site allocations and policy requirements, water quality could worsen in the Plan Area through waste development and management.</p>	

Key Issues	Description / Supporting Evidence	State of environment in absence of the Plan	Sustainability Objective (SO)
Flood risk	The National Planning Policy Framework seeks to avoid inappropriate development in areas at risk of flooding, but where development is necessary, to ensure that it is safe and does not increase flood risk elsewhere.	Site selection criteria, as well as a Flood Risk Assessment, are used to identify whether broad potential future locations for development represent the most appropriate choices in terms of flood risk.	3) To minimise the risk and impact of flooding.
	Surface water flood risk is relatively high in Essex with all main settlements being ranked in the top 1,000 settlements most susceptible to surface water flooding.	Without the Plan, the level of detail used to inform decisions of a strategic nature would not be as robust, especially regarding cumulative impacts. In addition, policy content can be used to set conditions on developments, or determine their refusal in areas of flood risk.	
	Significant levels of flood risk have been identified along the Essex coast and inland along river stretches.	Without this being an important consideration in the assessment of site allocations and policy requirements of flooding issues, the baseline could worsen in the Plan Area through inappropriate waste development and management.	
	Large areas of Southend are susceptible to both fluvial and tidal flooding.		
Protecting soils	In the Plan Area, approximately 75% of the land area is considered agricultural land and over half of this is of high grade soils.	The quality of agricultural land has protection within the NPPF, however for economic reasons only.	4) To maximise the sustainable use of land and the protection of soils, safeguarding the best and most versatile agricultural land.
	There are significant areas of Grade 1 agricultural land within Tendring and Rochford Districts, and smaller areas within Maldon District and Colchester Borough.	The Plan would be the predominant document in which to protect the wider sustainability aspects of such land from unsuitable waste related development. Without such a focus, development may arise on high quality land.	

Key Issues	Description / Supporting Evidence	State of environment in absence of the Plan	Sustainability Objective (SO)
Ensuring the sustainable use of land	New and safeguarded waste management facilities should be located in order to adhere to all relevant themes of sustainable development singularly and collectively.	The absence of the Plan could result in permissions being given for a range of facilities that, although the principle of development may be acceptable, would not conform to a spatial distribution strategy across the Plan Area.	
Protecting national and local heritage designations and their settings.	There are 13,991 listed buildings in the Plan Area; 272 of which are of exceptional interest (grade I) and 759 which are particularly important buildings of more than special interest (grade II*).	Although heritage and historic designations are protected nationally, allocating sites and devising policy criteria in a locally relevant plan-led system enables input by historic environment specialists on a site-by-site basis and the best outcomes in light of all alternatives. Without such a focus, there could be frequent and significant harm to historic assets and their settings throughout the Plan Area.	5) To conserve and enhance the historic environment, heritage assets and their settings
	There is a fairly even distribution of listed buildings within the Plan Area; however more in Uttlesford and Braintree and also around the town of Colchester.		
	The known archaeological resource in the Plan Area is very varied and highly significant; approximately 37,240 records of archaeological sites and finds.		
	Throughout the Plan Area there are 304 Scheduled Monuments, 228 designated Conservation Areas, 38 historic parks and gardens, and 1 of only 46 Registered Battlefield sites in the country.		

Key Issues	Description / Supporting Evidence	State of environment in absence of the Plan	Sustainability Objective (SO)
Protecting important designated and locally significant landscapes	In the Plan Area there is one AONB, Dedham Vale, which lies on the border of Suffolk and Essex covering an area of 90 sq km.	Although landscape designations are protected nationally, allocating sites and devising policy criteria in a locally relevant plan-led system enables input by landscape specialists on a site-by-site basis resulting in the best outcomes in light of all alternatives. Waste development by nature can be harmful to landscapes. Without such a strong focus on protection and mitigation through a plan-led system, development could occur in high quality landscapes in the Plan Area.	6) To minimise the impact on landscape and townscape character.
	There are 9 local authorities in the Plan Area that have land classified as being within the Metropolitan Green Belt. There are also local authorities within the Countryside Protection Zone.		
	There are many protected lanes in the Plan Area which have significant historic and landscape values. There are also over 100 special verges designated in the Plan Area.		
Transport related air quality issues in key areas	Air quality in Essex is generally good. The largest concentration of industrial processes in Essex are along the Thames Estuary.	Without adequate policy protection, it is conceivable that facilities might be located in unsuitable areas in relation to AQMAs.	7) To protect air quality in the Plan area.
	There are currently 15 Air Quality Management Areas within the Plan Area. Brentwood has the highest number of designated AQMAs with five of these located along the A12.		
	Levels of air pollution are generally similar in both rural and urban areas, with exceptions being those Air Quality Management Areas (AQMAs) in or around urban areas. All sites monitored have seen a significant fluctuation in results.		

Key Issues	Description / Supporting Evidence	State of environment in absence of the Plan	Sustainability Objective (SO)
Energy consumption from transport	In the Plan Area the largest proportion of energy consumption in 2010 was within the transport sector which accounted for 39.3% of the total energy consumed.	The Plan has scope to include energy from waste (EfW) facilities if viable and suitable in proposed locations. The likelihood of such proposals being permitted, and in the correct locations, is likely to be weaker in the absence of the Plan.	8) To maximise energy efficiency, the proportion of energy generated from renewable sources and adaptability to climate change.
	There has been a reduction in fuel consumed on all roads by HGV vehicles in the Plan Area with the exceptions of the M25 at Brentwood and A-roads in Uttlesford.		
Opportunities for Energy from Waste (EfW) facilities	Within the Plan Area there are 18 renewable energy schemes either built or in the planning system. These combine to produce a maximum total of 105.5 MW, with the energy generating capacity for two further biomass facilities and a solar farm yet to be accounted for. A number of AD and landfill facilities generate energy from waste.	An absence of the Plan's strategic commitment to minimise waste miles could give rise to inappropriate transport distances to facilities from the sources of waste.	
Promote waste prevention and material and energy prior to disposal.	In Essex and Southend, 342,882 tonnes which accounts for 49% of the total household waste was sent to landfill in 2012/13.	Without the Plan it is likely that waste would not be appropriately managed, especially on a strategic scale.	9) To ensure the sustainable management of waste, minimise the quantity of waste landfilled and to maximise the re-use, recovery and recycling of waste.
Addressing capacity deficits in relevant waste streams	<p>There are few facilities that managed organic waste arisings, especially in rural areas and there is a forecasted deficit in capacity requirements over the Plan period.</p> <p>At present, there are no energy recovery facilities either operational or under construction although there is one with planning permission at Rivenhall.</p>		

Key Issues	Description / Supporting Evidence	State of environment in absence of the Plan	Sustainability Objective (SO)
	<p>In line with anticipated growth in the Plan Area, it will be important to make sure there is adequate biological treatment capacity for the management of organic waste.</p>		
	<p>In line with anticipated growth in the Plan Area, it will be important to make sure there is adequate inert (CD&E) waste recycling capacity. An amount of inert (CD&E) waste is also imported from London and increases the potential arisings requiring management in the Plan Area.</p>		
The capacities of strategic routes	<p>There are persistent network efficiency issues on a number of strategic inter-urban routes - the A12 and M25 and M11 have widely recognised issues with poor reliability and delays. Congestion is common on specific sections of the Council-managed network, including sections of the A127, A130 and A414.</p>	<p>The Plan should seek the correct allocations to reduce waste miles and also explore the validity of sustainable transportation; neither of which could be managed on a strategic scale without the Plan. The impacts of any development on local roads can be negative, and a plan-led system will seek to alleviate these impacts through appropriate site allocations and policy requirements.</p>	<p>10) To promote the sustainable transport of waste and materials within Essex and Southend where viable, and to ensure safe highways access where necessary.</p>
Reducing waste miles	<p>Long distance waste travel occurs where larger or specialist facilities are required for that waste type.</p>		
Importing London waste	<p>Essex and Southend accept London's waste for management. This includes all three main waste streams, non-hazardous, construction, demolition and excavation and hazardous wastes, with the majority being CD&E (inert) and non-hazardous waste. The adopted London Plan 2015 commits to London working towards managing the equivalent of 100% of waste arising (excluding CDEW) inside their Plan Area by 2016. The Pre-Submission Waste Local Plan makes allowances for a proportion of London's CDEW as informed by the Duty to Co-operate.</p>		

Key Issues	Description / Supporting Evidence	State of environment in absence of the Plan	Sustainability Objective (SO)
Health impacts, and perceived health impacts on neighbouring receptors	Health impacts associated with dust, noise and odour are difficult to ascertain where impacts are mitigated through a plan-led system.	Impacts related to dust, noise and odour may increase without those policies in the Plan that ensure such impacts are mitigated.	11) To protect health and well-being in the Plan Area.
The capacities of strategic routes and local roads	There are persistent network efficiency issues on a number of strategic inter-urban routes - the A12 and M25 and M11 have widely recognised issues with poor reliability and delays. Congestion is common on specific sections of the Council-managed network, including sections of the A127, A130 and A414.	Without the evidence base of the Plan, which includes specialist highways input, it is likely that permissions would be granted in less sustainable locations..	12) To minimise public nuisance from waste treatment and disposal and from access to and from facilities.
Noise impacts from waste facilities	Ambient or environmental noise is defined as noise which is either unwanted or harmful. Some waste facilities can create noise that could impact on sensitive receptors	The cumulative impact of new facilities regarding noise on sensitive receptors might not be considered in the absence of a plan-led system. Similarly a plan-led approach will ensure mitigation and locational criteria for different types of waste facilities.	
Supporting economic growth and associated projects	Economic growth and development in the Plan Area has to be supported by appropriate facilities that adhere to the waste hierarchy.	The Plan will help ensure that appropriate facilities support growth and significant infrastructure projects in terms of the capacities and locations of facilities.	13) To support economic development in the Plan Area, including jobs arising from waste related activities.
Providing jobs in waste related industries	The relationship between the location of facilities and key centres for growth.	The Plan can ensure that large scale facilities are in proximity to key centres of population and growth. It can also ensure that waste development occurs in areas that support economic growth. Policies also exist that	

Key Issues	Description / Supporting Evidence	State of environment in absence of the Plan	Sustainability Objective (SO)
		ensure that the waste development does not give rise to any loss of wider economic benefits. Without such an approach it is likely that economic growth would suffer in the Plan Area.	

2.4.1 The Appraisal of Policies

The SA of the Plan appraises the document's policies against the Sustainability Objectives (SOs) outlined in the SA framework. The aim is to assess the sustainability effects of the Plan following implementation. The appraisal will look at the secondary, cumulative, synergistic, short, medium and long-term permanent and temporary effects in accordance with Annex 1 of the SEA Directive, as well as assess alternatives and suggest mitigation measures where appropriate. The findings will be accompanied by an appraisal matrix which will document the effects over time.

For clarity, within this Environmental Report, appraisals will be set out in the same format as shown in the following table.

Table 4: Impact on Sustainability Objectives

	Sustainability Objectives (SO)												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Short Term													
Medium Term													
Long Term													

The content to be included within the table responds to those 'significant effects' of the policy or element of the Plan subject to appraisal. Appraisals will also look at the following:

- Temporal effects;
- Secondary, Cumulative and Synergistic effects;
- The appraisal of Alternatives;
- Impacts on indicators; and
- Proposed mitigation measures / recommendations

These, and 'significant effects' are further described in the following sub-sections.

2.4.2 Description of 'Significant Effects'

The strength of impacts can vary dependant on the relevance of the policy content to certain sustainability objectives or themes. Where the policies have been appraised against the SA/SEA Sustainability Objectives the following key has been used to illustrate a range of possible impacts:

++	Significantly Positive	-	Negative
+	Positive	--	Significantly Negative
/	Uncertain	0	No impact

Commentary is also included to describe the significant effects of the policy on the sustainability objectives.

2.4.3 Description of ‘Temporal Effects’

The appraisals of the policies contained within the Plan recognise that impacts may vary over time. Three time periods have been used to reflect this and are shown in the appraisal tables as S (short term), M (medium term) and L (long term). For the purpose of the policy elements of the Plan S, M and L depict:

(S) Short term and (M) Medium Term: Early stages of the plan period.

(L) Long term: Latter stages of the plan period / restoration / beyond restoration (where relevant)

2.4.4 Description of ‘Secondary, Cumulative and Synergistic Effects’

In addition to those effects that may arise indirectly (secondary effects), relationships between different policies will be assessed in order to highlight any possible strengthening or weakening of impacts from their implementation together. Cumulative effects respond to impacts occurring directly from two different policies together, and synergistic effects are those that offer a strengthening or worsening of more than one policy that is greater than any individual impact.

2.4.5 Description of ‘Alternatives Considered’

Planning Practice Guidance states that reasonable alternatives are the different realistic options considered by the plan-maker in developing the policies in its plan. They must be sufficiently distinct to highlight the different sustainability implications of each so that meaningful comparisons can be made. The alternatives must be realistic and deliverable.

Alternatives for the direction of policies will be appraised and chronicled alongside each appraisal, together with the reason for their rejection / non-progression.

2.4.6 Description of ‘Impacts on Indicators’

In order to quantify the potential impacts highlighted in the policies, a range of indicators have been identified directly relevant to the impacts specified. These will help monitor the successfulness of the policy and to what extent it has helped deliver sustainable development.

2.4.7 Description of ‘Proposed Mitigation Measures / Recommendations’

Negative or uncertain impacts may be highlighted within appraisals. As such, mitigation measures may be needed and these will be highlighted in this section for each policy where relevant. In addition to this, this section will also include any recommendations that are not directly linked to negative or uncertain impacts, but if incorporated may lead to sustainability improvements.

3 The Strategy

This section sets out the appraisal of the Replacement Waste Local Plan (RWLP) Vision, Strategic Objectives, and Spatial Strategy for Essex and Southend-on-Sea up to 2032. The 'Vision' sets an aspiration for how waste will be managed in the Plan area by the end of the Plan period. From the Vision, a number of 'Strategic Objectives' are defined. These are the issues and opportunities that must be addressed in order to achieve the Vision. Finally, the 'Spatial Strategy' provides the means by which the Strategic Objectives are proposed to be met within the context of the Plan area.

3.1 The Proposed Vision

By 2032, Essex and Southend-on-Sea will have achieved net self-sufficiency (net self-sufficiency recognises that there will be some cross boundary movement of waste, as it is often more sustainable to take waste to a facility out of the Plan area to reduce waste miles where the source of waste arisings is close to an administrative boundary. Therefore, the premise is to provide for the equivalent quantity of waste arising within the Plan Area, irrespective of where it arises) in our waste management where practicable. Households, businesses, the public sector and voluntary organisations within the Plan area will be taking responsibility for waste reduction, re-use and recycling. Where waste is unavoidably created, all opportunities to recover the value from waste will be explored in order to minimise the amount of waste sent to landfill to help achieve a 'circular economy'.

The Plan will provide sufficient waste management infrastructure in Essex and Southend-on-Sea to meet the existing and forecasted amount of waste expected to arise over the Plan period. The forecast includes a decreasing proportion of London's waste exports to the Plan Area, as informed by the adopted London Plan (2015).

Waste management facilities will be located, designed and operated without adverse impacts on the amenity of local communities, the natural and historic environment, the landscape and the townscape of Essex and Southend-on-Sea. Opportunities to enhance such features will be supported.

The Plan will offer a degree of flexibility whilst still maintaining a Plan-led approach to the delivery of waste management facilities, which is sympathetic to the Waste Hierarchy. The co-location of complementary waste facilities and non-waste developments (e.g. housing and employment) will be encouraged, where appropriate, to facilitate synergies and efficiencies in waste management and transport, whilst recognising the potential risks of cumulative impacts.

Waste management within the Plan area will be undertaken in ways that minimises the impact on climate change, primarily through the minimisation of waste transportation distances and landfilling. Facilities will also be designed and located to reduce the risk from climatic effects such as flooding, particularly in the low-lying coastal areas of Essex and Southend-on-Sea.

3.1.1 Significant Effects

	Sustainability Objectives (SO)												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Short Term	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Medium Term	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Long Term	+	+	+	+	+	+	+	+	++	+	+	+	+

The Vision focuses on waste management, and as such the only significant effect will be realised for Sustainability Objective 9 (defined as ‘to ensure the sustainable management of waste landfilled, to maximise the re-use, recovery and recycling of waste and to promote the minimisation of waste produced at source’). The Vision strongly adheres to this objective through a commitment to the specifics of the Waste Hierarchy without disregarding the Plan Area’s key issues and requirements. Conformity to other Sustainability Objectives is more directly adhered to in the Plan’s policies appraised elsewhere in this document, although minor positive impacts across all the Sustainability Objectives can be expected through the Vision, where it iterates national requirements and guidance in a local context.

3.1.2 Temporal Effects

As the Vision focuses on the Plan Area in 2032, no short or medium term impacts have been predicted although it should be recognised that steps taken in the short and medium term will themselves give rise to positive impacts. The Plan’s policies focus on how the Vision is achieved throughout the plan period, and these have been subject to appraisal elsewhere in this document. As such the Significant Effects section of the Vision appraisal focuses on the long term temporal impacts.

3.1.3 Secondary, Cumulative and Synergistic Effects

A commitment to moving waste management up the waste hierarchy, particularly recycling, is also consistent with the minerals supply hierarchy as specified in the Adopted MLP, which has further synergistic positive impacts on Sustainability Objective 4 (To maximise the sustainable use of land and the protection of soils, safeguarding the best and most versatile agricultural land).

3.1.4 Alternatives Considered

The Vision at the Issues and Options (2010) and Preferred Approach (2011) stages responded largely to national requirements at the time and where these are similar to the requirements in the current climate they have been progressed to the Pre-Submission stage. Any differences between the proposed Vision at the Issues and Options (2010) and Preferred Approach (2011) stages and at the Revised Preferred Approach (2015) and Pre-Submission stages reflect the changes to national requirements since the NPPF and as such can not be considered reasonable alternatives. Despite this, the general notion of the Plan's Vision as outlined in both the Issues and Options (2010) and Preferred Approach (2011) were re-explored at the Revised Preferred Approach (2015) stage for robustness. As such, the following reasonable alternative was considered, along with its reason for rejection:

- Alternative 1: To plan more strictly for self-sufficiency (Revised Preferred Approach 2015)

	Sustainability Objectives (SO)												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Alternative 1	/	+	+	-	+	/	/	+	+	/	/	/	++

Reason for rejection: The Preferred Vision's concept of planning for net self-sufficiency 'where practicable' aligned the Vision with current national guidance, which states that 'there are clearly some wastes which are produced in small quantities for which it would be uneconomic to have a facility in each local authority'. The alternative of strict net self-sufficiency, iterating the national stance before the NPPF, was re-explored and rejected for the reason that local circumstances dictate that this is not a practicable approach. The alternative of strict net self-sufficiency would, for example, require facilities for waste streams that are better managed outside the Plan Area. The plan's evidence base supports a notion that these facilities are not considered practical to be provided within the local context of the Plan Area and as such the alternative of strict self-sufficiency was rejected, and the Pre-Submission Vision has been selected in order to meet national requirements in a local context.

A variation to plan more strictly for self-sufficiency was re-explored at the Revised Preferred Approach stage. This considered the general notion of the Vision as outlined in previous iterations of the Plan before the NPPF but within the context of current national requirements. Alternative 1 will have less positive impacts on the sustainable management of waste (Sustainability Objective 9) in line with the requirements of national policy and local evidence. There will however be significant positive impacts on employment creation through a general assumption of an enhanced number of facilities in the Plan Area. There will be uncertain impacts, and in comparison to the Pre-Submission Vision a larger scope for negative impacts, on Sustainability Objective 10 (transport) associated with the proximity principle where it should be acknowledged that more sustainable and appropriate facilities may cross administrative boundaries. Such uncertainty also surrounds impacts on those objectives that may not specifically benefit from a larger amount of facilities in the Plan Area, including biodiversity, landscape, air quality, health and wellbeing and public nuisance and access. The Pre-Submission Vision's concept of planning for net self-sufficiency 'where practicable' aligns the Vision with national guidance, which states that 'there are clearly some wastes which are produced in small quantities for which it would be uneconomic to have a facility in each local authority'. The alternative of strict net self-sufficiency would, for example, require facilities for waste streams that are better managed outside the Plan Area. The plan's evidence base supports a notion that these facilities are not considered practical to be provided within the local context of the Plan Area. As such, the alternative would have negative impacts on Sustainability Objective 4 regarding the sustainable use of land.

3.1.5 Impacts on Indicators

The impact of the Vision on indicators will be as a result of the implementation of the Plan's policies. As such, impacts are more suitably discussed in the appraisal of these within the relevant sections of this document.

3.1.6 Proposed Mitigation Measures / Recommendations

No mitigation methods have been recommended.

3.2 The Strategic Objectives

In order to achieve the Vision, a number of Strategic Objectives are proposed. These Objectives are high-level aims that need translating into the Spatial Strategy.

SO1. To support the work of partner organisations, including District, Borough and City Councils, the Waste Disposal Authorities, Waste Collection Authorities, the Environment Agency, the waste industry, the business sector and voluntary organisations to promote and maximise waste prevention measures amongst all waste producers, both from the business sector as well as consumers.

SO2. To support an increase in the proportion and the quantity of waste that is re-used, recycled and recovered within the Plan area to meet local targets for recycling and recovery.

SO3. To safeguard and encourage opportunities to enhance existing waste infrastructure which provide an important contribution to waste management at sites that serve the Plan area.

SO4. To achieve net self-sufficiency in waste management by 2032, where practicable, with an associated reduction in the amount of waste from London that is disposed of in the Plan area, in line with the London Plan.

SO5. To make provision, through site allocations, to meet the need for new waste management facilities, and ensure flexibility through the inclusion of Areas of Search and 'criteria-based' locational policies.

SO6. To support the reduction of greenhouse gas emissions, primarily by moving waste up the hierarchy to minimise the need for landfill and by minimising waste transport and distance by locating new waste facilities in proximity to key growth centres.

SO7. To maximise opportunities for sustainable economic growth through the co-location of waste facilities with other waste uses and/or complimentary non-waste development. This encourages the use of waste as a resource, such as considering it as a potential source of heat and energy.

SO8. To ensure waste facilities and their proposed locations are sustainably designed, constructed and operated to reduce potential adverse effects on human health, amenity and the natural and historic.

Justification for these Strategic Objectives can be found below:

SO1 – Whilst the Waste Planning Authority cannot directly require a reduction in waste, it will seek to work with those partner organisations that can influence this objective.

SO2 – The Plan can make provision for facilities considered necessary to move the management of waste further up the Waste Hierarchy.

SO3 – Waste facilities can be problematic to locate due to their size and/or potential impact on local amenity. For existing facilities it is vital that such facilities can continue to operate and contribute to the waste management needs of the Plan area.

SO4 – In line with the adopted London Plan 2015, the RWLP makes provision for a decreasing amount of waste exports from London (excluding excavation waste). With the exception of the need to take a proportion of London's waste, the RWLP only makes provision for sites required to manage the amount of waste arising in the Plan area on a net self-sufficiency basis (where

practicable) in conformity with the proximity principle.

SO5 – Direct site allocations aim to offer sufficient capacity to deliver waste management requirements during the Plan period. These allocations are supported by Areas of Search to accommodate local needs as well as locational criteria which allow the market flexibility.

SO6 – Demonstrates conformity with the NPPW and National Waste Management Plan for England (2013), which recognises that effective waste management reduces potential climatic impacts.

SO7 – Co-location offers the opportunity for efficient use of waste as a resource and offers a potential reduction in waste transportation. Ensuring opportunities for ‘other recovery’ acts as another and final potential diversion from landfill, as supported by the Waste Hierarchy.

SO8 – Section 5 of the NPPW requires, inter-alia, Waste Planning Authorities to assess the suitability of sites and/or areas for new or enhanced waste management facilities against “the cumulative impact of existing and proposed waste disposal facilities on the well-being of the local community, including any significant adverse impacts on environmental quality, social cohesion and inclusion or economic potential.”

3.2.1 Compatibility of the Plan’s Strategic Objectives with the Sustainability Objectives

RWLP Objectives	Sustainability Objectives (SA Objectives)												
	1	2	3	4	5	6	7	8	9	10	11	12	13
1 Maximise waste prevention	0	0	0	0	0	0	0	0	++	0	0	0	0
2 Re-use, Recycling & Recovery	0	0	0	+	0	0	0	0	++	0	0	0	0
3 Safeguarding existing infrastructure	0	0	0	++	0	0	0	0	+	0	0	0	0
4 Self-sufficiency / London waste	0	0	0	+	0	0	0	0	++	0	0	0	0
5 Site Allocations and flexibility	0	0	0	0	0	0	0	0	++	0	0	0	0
6 Reduce greenhouse gas emissions	0	0	0	+	0	0	+	++	0	+	0	0	+
7 Sustainable economic growth	0	0	0	0	0	0	0	++	0	0	0	0	++

RWLP Objectives	Sustainability Objectives (SA Objectives)												
	1	2	3	4	5	6	7	8	9	10	11	12	13
8 Health / Amenity / Environment	+	0	0	0	0	/	0	0	0	0	++	+	0

There will be significant positive impacts on SA Objective 4 (to maximise the sustainable use of land and the protection of soils, safeguarding the best and most versatile agricultural land) through safeguarding and enhancing existing strategic waste infrastructure (SO3). There will also be minor positive impacts through reducing the amount of waste sent to landfill (SO2), net self-sufficiency (SO4) and promoting development on appropriate employment land in urban areas (SO6) where they promote the sustainable use of land.

There will be significant positive impacts on SA Objective 8 (to maximise energy efficiency, the proportion of energy generated from renewable sources and adaptability to climate change) through SO6, which pursues opportunities for energy recovery and utilisation, and also SO7 which seeks to use waste as a resource as a source of energy.

There will be significant positive impacts on SA Objective 9 (to ensure the sustainable management of waste landfilled, to maximise the re-use, recovery and recycling of waste and to promote the minimisation of waste produced at source) through seeking to maximise waste prevention (SO1), increasing the quantity and quality of waste re-used, recycled and recovered (SO2) achieving and delivering net self-sufficiency (SO4) and ensuring suitable strategic site allocations are made to meet predicted demand regarding all relevant facilities (SO5). There will also be positive impacts through safeguarding and enhancing existing infrastructure (SO3).

There will be significant positive impacts on SA Objective 11 (to protect human health and well-being and maintain the quality and quantity of public open space amenity across Essex and Southend) where SO8 seeks to ensure that new waste facilities are well operated to reduce the potential adverse effects on human health, amenity and the environment.

There will be significant positive impacts on SA Objective 13 (to maximise opportunities for economic development, including jobs, arising from waste related activities) where SO7 seeks to maximise opportunities for sustainable economic growth by using waste as a resource for local industry and a source of energy. Similarly, there will be a minor positive impact where waste development is promoted on appropriate employment land in urban areas (SO6), which is likely to correlate with planned housing growth in the plan period.

There is a single uncertain element arising from SO8 on landscape and townscape character (SA Objective 6), where it is unclear whether this issue is sufficiently covered under 'general amenity'.

3.2.2 Temporal Effects

There will be no temporal effects regarding the impacts of the Strategic Objectives.

3.2.3 Secondary, Cumulative and Synergistic Effects

Despite SA Objectives 2 (water quality), 3 (flooding), 5 (historic environment) and 6 (landscape / townscape) not having been met directly by the Strategic Objectives, a number of indirect impacts will arise from the successful implementation of the Strategic Objective 8. Strategic level waste development plans can not be expected to focus directly on these SEA Objectives, but rather account for any impacts on receptors that may occur as a result of the plan's primary focus. Similarly, although sustainable methods of waste transportation (SA Objective 10) are not

specifically mentioned within any of the Strategic Objectives, there will be indirect cumulative impacts on this objective through reducing the amount of waste at its source (SO1) and reducing imports from London (SO3).

3.2.4 Alternatives Considered and Reasons for Rejection

The Strategic Objectives have evolved from those explored in the Issues and Options (2010), Preferred Approach (2011) and remain similar to those of the Revised Preferred Approach (2015). Previous iterations of these Objectives were larger in number and broadly wider ranging to reflect added emphasis on net self-sufficiency. Previous versions, before the requirements of the NPPF, could also be considered to detract from the Plan's primary focus in terms of what is practicable in the modern climate and offered a less flexible approach over the plan period. Changes in national requirements and guidance since 2011 have also dictated the Strategic Objectives. As such, and in line with the Strategic Objectives reflecting the Vision and being expanded on in more detail through the Local Plan's policies, no specific alternative approaches to the Strategic Objectives have needed identification for consideration and assessment for the purposes of Sustainability Appraisal.

3.2.5 Impact on Indicators

The impact of the Strategic Objectives on indicators will be as a result of the implementation of the Plan's policies. As such, impacts are more suitably discussed in the appraisal of these.

3.2.6 Proposed Mitigation Methods / Recommendations

There is scope for the Strategic Objectives to cover landscape, townscape and the historic environment more clearly, possibly within Strategic Objective 8, where the issue is not directly relevant to environmental or amenity concerns. Despite this though the SA is satisfied that these issues are sufficiently covered in other Plan Policies and also through the site assessment methodology used to select appropriate sites.

3.3 The Overall Spatial Strategy

The Spatial Strategy sets out how the over-arching vision can be spatially implemented in the Plan Area. The Spatial Strategy reflects the complexities of addressing waste issues in a Plan Area which incorporates both dense urban areas and those which are very rural. It provides a steer for waste development to be focused in specific areas / locations throughout the Plan period, reflecting the priorities of the waste hierarchy and facilitating a reduction in the transportation of waste.

3.3.1 The Overall Spatial Strategy

The Waste Planning Authorities are planning on the basis of net self-sufficiency, where practicable, in their waste management by 2032. New waste development should be principally directed towards the key urban centres of Basildon, Chelmsford, Colchester, Harlow and Southend-on-Sea. This approach reflects the location of the main population centres and where growth and employment is concentrated in the Plan area. This ensures that the majority of waste arising can be managed and treated as close as possible to its source. There is a recognised need to ensure that other settlements are also adequately served whilst being sympathetic to the infrastructure and amenity constraints in such localities.

The Waste Planning Authorities will continue to rely on a network of strategic waste management facilities to manage Local Authority Collected Waste arising in the Plan area. Primarily this is based on the strategic Integrated Waste Management Facility at Tovi EcoPark in Basildon and the supporting network of six Local Authority Collected Waste transfer stations located across the Plan area.

In recognition of the complexities of securing appropriate sites for waste management, the allocated and existing sites within the Plan area have been safeguarded. This ensures that the continued operation of these facilities is not adversely affected by other development. New sites have been allocated to meet the forecasted increase in waste management needs for waste streams up to 2032.

In order to offer a degree of flexibility within the Plan Area, and to direct waste management facilities serving a predominantly local need towards appropriate locations, Areas of Search have been designated. These Areas have been designated around employment areas allocated in Local Development Plan documents which are considered to be suitable for waste development in principle. In recognition that not all waste facility types would be appropriate in employment areas, and to afford further flexibility, locational criteria policies are included to guide the location of waste development proposed during the Plan period.

Opportunities to co-locate facilities on existing waste management sites, or alongside compatible non-waste development, will be supported when appropriate to do so. Opportunities to support sustainable waste practises, including the use of waste a resource will be supported through close working with Local Planning Authorities in the Plan area.

3.3.2 Significant Effects

	Sustainability Objectives (SO)												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Short Term	/	/	/	++	/	/	/	/	++	++	/	/	++
Medium Term	/	/	/	++	/	/	/	/	++	++	/	/	++
Long Term	/	/	/	++	/	/	/	/	++	++	/	/	++

There will be significant positive impacts on the sustainable management of waste (SO9), the sustainable transportation of waste (SO10) and economic growth (SO13) in line with the Spatial Strategy's commitments to allocating and safeguarding strategic sites, the identification of suitable employment areas for which waste management facilities are deemed suitable (Areas of Search) and a general distribution focused on key centres for growth. There will also be significant positive impacts on the sustainable use of land (SO4) through the exploration of the co-location of facilities and with compatible non-waste development. The strategy has been broadly assessed as having uncertain impacts on the remaining Sustainability Objectives where they relate to local level issues that can not be adequately covered at this scale. These impacts have been explored in the appraisal of the Plan's policies and can be found elsewhere in this report.

The current Spatial Strategy responds to a more flexible iteration of the previous hybrid of strategy options explored at both the Issues and Options and previous WDD Preferred Approach (2011) stages, and is largely indistinct from that of the Revised Preferred Approach stage (2015) aside from heightened positive impacts on SO4 associated with the inclusion of the Areas of Search for flexibility. The most notable change from those explored at the Issues and Options (2010) and Preferred Options (2011) stages represents less of a focus on the IWMFs. This has allowed the strategy to better reflect notions of distribution throughout the Plan Area and the positive elements of the alternative strategy options explored throughout the plan-making process whilst also becoming more flexible in line with growth in the county over the Plan period. Since 2012, the NPPF has required district level growth targets to be objectively assessed; a significant change in approach from the top-down figures of the RSS.

Local Planning Authorities will have their Objectively Assessed Need (OAN) independently examined through the Local Plan making process as district-level Local Plans approach adoption. At present the districts, boroughs and unitaries within the Plan Area are at widely different stages of the Local Plan making process and as such the RWLP can only make assumptions regarding the broad growth needs of the Plan Area. This requires the RWLP to be flexible not only in the allocation of strategic sites, but also in formulating approaches that can sustainably plan for any additionally required and non-strategic sites. Within the Spatial Strategy this is reflected through the locational criteria for new sites and the methodology behind identifying Areas-of-Search; where the principle of development for waste management facilities has been assessed. Regarding the allocation of sites within the Plan, the Spatial Strategy responds to the sustainable, available and viable sites that came forward in response to the Plan's call-for-sites. As such the strategy reflects the most sustainable option in response to previous consultations, security and flexibility.

3.3.3 Temporal Effects

The temporal effects of the Spatial Strategy will remain largely uncertain for the majority of the Sustainability Objectives due to the flexible nature of the approach in response to growth. The positive impacts highlighted above will remain and are likely to strengthen in the long term,

particularly regarding the sustainable management of waste (SO9).

3.3.4 Secondary, Cumulative and Synergistic Effects

There will be positive cumulative impacts in relation to the sustainable transportation of waste within Policy 12, which deals more specifically with this requirement.

3.3.5 Alternatives Considered

The following reasonable alternatives were considered, and they are presented along with their reason for rejection. The Issues and Options document looked at various different alternative options to define the spatial strategy including:

- Alternative 1: Issues & Options A – Expansion and co-location with existing facilities;
- Alternative 2: Issues & Options B – Existing key urban centres of population and growth;
- Alternative 3: Issues & Options C – De-centralised approach;
- Alternative 4: Issues & Options D – Areas with limited existing capacity; or
- Alternative 5: Issues & Options E – A hybrid option (2011 Preferred Approach [WDD]) - The WPAs will address the waste management capacity requirements for the Plan area 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) to support the additional Site allocations for strategic recycling and recovery facilities to meet the capacity gap. Should any further sites be required, flexibility is provided through the locational criteria-based policies and development management requirements.

	Sustainability Objectives (SO)												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Alternative 1	/	/	/	+	/	/	/	/	+	/	/	/	+
Reason for rejection: This approach would lead to certain areas, such as the north west of the Plan Area, to continue to be less well served. The approach is similarly inflexible regarding its response to growth across the Plan Area, particularly since the removal of top down regional growth targets and the requirements of the NPPF for Local Planning Authorities (LPAs) to objectively assess their needs for growth. For these reasons this alternative has been rejected.													
Alternative 2	/	/	/	/	/	/	/	/	++	++	/	/	+
Reason for rejection: This approach would singularly also lead to certain areas, again such as the north west of the Plan Area, to continue to be less well served. The approach, although responding better to expected growth in the Plan Area than Alternative 1, can also be considered inflexible regarding its response to growth across the Plan Area since the removal of top down regional targets and the requirements of the NPPF for Local Planning Authorities (LPAs) to objectively assess their needs for growth. This could lead to growth being focussed outside existing settlements. The alternative is limited in its scope to adapt to changing circumstances in the Plan Area and for these reasons this alternative has been rejected.													
Alternative 3	/	/	/	/	/	/	/	/	+	/	/	/	+
Reason for rejection: The alternative alone does not allow for economies of scale. The local level provision of facilities would require a lot more mitigation of individual impacts and improvements to the rural road network specific to each facility and with negligible secondary benefits. For these													

reasons the alternative has been rejected.													
Alternative 4	/	/	/	/	/	-	-	/	--	-	/	/	-
Reason for rejection: The alternative fails to respond to the proximity principle within the Plan Area and may be seen as too heavily influenced by London imports. Whilst areas of limited capacity are known, these may not accurately respond to a waste capacity need, particularly as waste data is not able to be collated at a district or smaller level. The alternative would also require significant improvement of infrastructure routes, which is not a feasible approach. For these reasons the option was rejected.													
Alternative 5	/	/	/	+	/	/	/	/	--	+	/	/	/
Reason for rejection: The Integrated Waste Management Facility at Stanway is not a Preferred Site allocation as the planning permission previously granted has now expired. This would see the Plan underproviding. As such, this Spatial Strategy option can not be considered viable or a reasonable alternative.													

Alternative 1: At the Issues and Options (2010) stage the SA identified significant positive impacts associated with expansion directly adhering to planned growth. The approach had positive impacts on transportation of waste in line with the proximity principle; however it was identified that certain areas such as the north west of the Plan Area would continue to be less well served. At this stage, and since the NPPF, the option does not recognise the need to supply those areas with less growth / existing facilities. This would mean that the option would have more uncertainty regarding SO9 and SO10 (sustainable waste management and its transportation).

Alternative 2: At the Issues and Options stage the SA identified significant positive impacts regarding the sustainable management and transportation of waste associated with providing increased waste management facilities directly in line with what were then set targets for future growth in the Plan Area. This would also have had significant positive impacts associated with the transportation of waste and the proximity principle. In the modern climate, and since the abolition of the RSS, these impacts can be replaced with a degree of uncertainty surrounding these key objectives. The alternative may not respond well to objectively assessed growth in the Plan Area in terms of the location of new facilities..

Alternative 3: At the Issues and Options stage the SA identified significant positive impacts associated with the dispersal of sites around the Plan Area functioning to serve local areas with current under provision. In addition, this was seen to distribute the employment benefits of waste management facilities across the Plan Area. A heightened need for flexibility and what is practicable in more recent national guidance creates uncertainty across all the Sustainability Objectives through re-exploring the viability of the option. Despite the benefits of this approach in theory, the alternative alone does not allow for economies of scale. The local level provision of facilities would require a lot more mitigation of individual impacts and improvements to the rural road network specific to each facility and with negligible secondary benefits.

Alternative 4: At the Issues and Options stage the SA identified the alternative as having negative impacts on landscape character due to a larger concentration of strategic sites being located in the Metropolitan Green Belt. Alternative 4 would also have a negative impact on air quality associated with facilities and associated traffic being in Greenfield areas which are traditionally more sensitive areas to change. In addition it was assessed that there would be negative impacts on the sustainable management and transportation of waste where the alternative fails to respond to the proximity principle within the Plan Area, and may be seen as too heavily influenced by London imports. A reassessment of the option in line with current national requirements and guidance does not change the viability of this alternative. A focus purely on areas with current under-provision would not take into account the increase in growth expected in key centres, even if those key

centres are currently adequately served.

Alternative 5: Alternative 5 was the previously preferred Spatial Strategy in the WDD Preferred Approach (2011). The above appraisal reflects that of the Sustainability Appraisal of the previous preferred Spatial Strategy at that stage, when the IWMF at Stanway was an allocated and viable strategic allocation in the Plan. The approach was identified as having a number of significantly positive impacts resulting from what was a hybrid option developed from multiple elements of the options explored at the Issues & Options (2010) stage with a large emphasis on strategic site allocations. It sought flexibility by allowing new proposals to come forward during the plan period, should they meet the locational criteria of other policies. In terms of strategic sites, the approach offered an efficiency of land that co-locates multiple types of facility on a single site. Due to the expiration of the planning permission at the Stanway IWMF, this fundamental element of the strategy option has since made this alternative unviable and unreasonable.

3.3.6 Impacts on Indicators

The implementation of this policy will impact on the following indicators:

- Tonnage recycled.
- Tonnage composted.
- Tonnage landfilled.
- Traffic volumes in key locations.
- Location of Strategic Lorry Routes.

3.3.7 Proposed Mitigation Measures / Recommendations

No mitigation measures have been recommended.

3.4 Need for Waste Management Facilities

The Plan must make provision for the capacity requirements identified through the evidence base, including the Waste Capacity Gap report, reflecting the local circumstances.

The Plan makes provision for the capacity requirements identified through the Waste Capacity Gap analysis, seeking to deliver net self-sufficiency where practicable and reflecting local circumstances. This is achieved by:

- safeguarding existing waste management capacity (see Safeguarding Waste Management Sites and Infrastructure);
- allocating strategic sites for new facilities (see Strategic Site Allocations) to meet shortfalls in capacity; and
- providing a policy framework for other sites to be considered where there is a proven need for them in the Plan Area.

Limited cross border waste movements would need to be justified on their merits. They may be acceptable if they would help to enable waste to be dealt with in one of the nearest appropriate installations and would not prejudice the achievement of net self-sufficiency for Essex and Southend-on-Sea.

The principle of net self-sufficiency does not apply to hazardous and low-level radioactive waste. This is because the management of the relatively small amounts of such waste generated will usually take place at either the specialist facilities for a particular industry or larger facilities to meet a national or regional need.

3.4.1 Policy 1: Need for Waste Management Facilities

In order to meet the future needs of the Plan area, waste development will be permitted to meet the shortfall in capacity of:

- a. Up to 217,000 tonnes per annum by 2031/32 of biological treatment for non-hazardous organic waste;
- b. Up to 1.5 million tonnes per annum by 2031/32 for the management of inert waste;
- c. Up to 200,000 tonnes per annum by 2031/32 for the treatment of other waste; and
- d. Up to 50,250 tonnes per annum by 2031/32 for the management of hazardous waste.

3.4.2 Significant Effects

	Sustainability Objectives (SO)												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Short Term	0	0	0	0	0	0	0	0	++	0	0	0	0
Medium Term	0	0	0	0	0	0	0	0	++	0	0	0	0
Long Term	0	0	0	0	0	0	0	0	++	0	0	0	0

At the Revised Preferred Approach (2015) stage forecasting for non-hazardous organic waste (for biological treatment [this waste stream is a combination of the Local Authority Collected Waste (LACW) stream and the commercial and industrial (C&I) waste stream]) looked at (for C&I wastes) local arising estimations plus a portion of the Greater London Local Plan arising estimations, and (for LACW) data supplied by local authorities. Regarding the LACW waste stream, the Revised Preferred Approach (2015) looked at a scenario of 0% annual growth in waste arisings over the Plan period due to population increases being offset by existing and planned future waste prevention and minimisation measures. This approach was based on the levels of recycling and composting of household waste as set out in Waste Strategy for England 2007 and presented in the adopted 2008 Joint Municipal Waste Management Strategy (JMWMS). The new forecasting methodology used for the Pre-Submission Plan instead assumes the growth rates applied in the national Defra central forecast (0.2% per annum) to the Baseline Projection and extrapolates that forward to the end of the Plan period. This is more in line with, and follows the guidance of the PPG, which requires a level of growth to be considered and added flexibility within the Plan. As a result the 0% annual growth scenario has been discounted for LACW. The approach to C&I forecasting has not changed between the Revised Preferred Approach (2015) stage Plan and the Pre-Submission Plan.

Regarding inert waste, the Revised Preferred Approach (2015) approach to deriving a baseline figure for arisings looked at a mid-range scenario between a theoretical uplift of capacity on existing facilities (maximum recycling efficiency) and a reliance on existing facilities at current capacities. The Pre-Submission Plan relies on a different approach to calculate the baseline figure, the largest difference being the assumptions around how waste has been dealt at intermediate facilities. The key difference (in respect of projecting through the Plan period) between the Revised Preferred Approach (2015) and the Pre-Submission Plan forecasting methodology is that the latter assumes a default growth scenario of zero. This is, as suggested in the waste chapter of Planning

Practice Guidance, as *'Waste planning authorities should start from the basis that net arisings of construction and demolition waste will remain constant over time'*. This reflects the wide fluctuations in CDEW (inert waste) arisings which occur from year to year as construction projects commence and complete. There is no reason to suggest that the situation in the Plan Area is any different and therefore a zero growth rate, as recommended by PPG, has been applied. The most recent arisings data available (2014) indicates that this should be projected at 3.311mtpa throughout the plan period (including a portion of London's inert waste). Comparison between this figure and current consented recycling capacity capable of processing this waste stream (at 2.118mtpa) shows an immediate shortfall of 1.5mtpa. This is reflected in Policy 1 as the shortfall for inert waste.

Other Waste Management – At the Revised Preferred Approach (2015) stage, specific provision was not referenced on the basis that the exact destination of this waste would be determined through market forces. While the situation in respect to the potential destination has not changed, the assumption in the RPA (2015) that it could continue to be sent to landfill void space with existing capacity within the Plan Area does not accord with the Waste Hierarchy and self-sufficiency. Therefore specific provision for a waste management facility to deal with this residue rather than existing landfill capacity has been made within the Pre-Submission document.

Hazardous Waste - At the RPA (2015) stage, the preferred approach to hazardous waste arisings over the Plan period was to use those data returns published by the Environment Agency within their annual Hazardous Waste Interrogator. This database looks at hazardous waste movements when they 'change hands' between producers and disposal / treatment facilities. The quality of this data was, and is, considered good due to the nature of the waste. Despite this, the Revised Preferred Approach (2015) did not factor in comparison figures from the Waste Data Interrogator (which additionally captures all hazardous waste movements) , or the EA Pollution Inventory (which also crucially captures hazardous waste arising from certain waste management facilities such as landfills and Energy from Waste plants). It should also be noted that the Revised Preferred Approach (2015) approach assumed that hazardous waste management facilities within the Plan Area merely resulted in the transfer of waste elsewhere. The Pre-Submission Plan again uses figures from the Environment Agency's Hazardous Waste Interrogator (albeit more up to date), although additionally integrates these with the Waste Data Interrogator and the EA Pollution Inventory in order to get a more accurate figure. There has also been a more sophisticated analysis of inputs and outputs from principal Plan Area facilities managing hazardous waste. Regardless of this change in methodology, a similar shortfall in capacity has been highlighted.

The Policy has been assessed as having no direct impacts on the majority of the Sustainability Objectives. This is due to the differing impacts that may theoretically occur from the Policy's many facility types required for the biological treatment for non-hazardous organic waste, the recovery of inert waste, the disposal of inert waste to landfill and the disposal of stable non-reactive hazardous waste. This Policy has been assessed in regard to the arisings forecasts and the methodology used for these estimates. Those Sustainability Objectives that have been assessed as having no impact are better addressed on a site-by-site / facility-by-facility basis (in Policy 3 and Chapter 7) and in those Policies that specify the locational criteria for facility types.

The Policy will have significantly positive impacts on the sustainable management of waste (SO9) in response to the preferred methodology for forecasting arisings for each of the waste streams. The Policy is flexible in adapting to possible changes over the Plan period and has been formulated in line with national guidance (Planning Practice Guidance), requirements and the principles of the Waste Hierarchy. The approach factors in growth for non-hazardous organic waste, directly responding to the possible implications of housing growth and in consideration of few adopted District-level Local Plans in the Plan Area (with growth calculated from objectively assessed need). This approach can respond to this, and in line with the Spatial Strategy and the proximity-principle, with a focus on those locations that the largest amount of growth is most likely

to be experienced.

3.4.3 Temporal Effects

There will be no temporal effects as a result of this Policy. The flexibility of the approach allows the WPA to plan effectively for future uncertainty surrounding growth levels in the Plan Area over the Plan Period.

3.4.4 Secondary, Cumulative and Synergistic Effects

This Policy can respond to changes in growth in the Plan Area in accumulation with the Spatial Strategy and the proximity-principle, with a focus on those locations that the largest amount of growth is most likely to be experienced. There will therefore be positive cumulative impacts on a large number of relevant sustainability objectives with the Spatial Strategy.

3.4.5 Alternatives Considered using (previous) Revised Preferred Approach (2015) Methodology

The following reasonable alternatives were considered for CD&E, C&I and stable non-reactive hazardous waste arising estimates, along with their reason for rejection:

- Alternative 1: CD&E – the previous Revised Preferred Approach (2015) approach, reflecting an increase in arisings based on economic growth (including a mid-range scenario between a theoretical uplift of capacity on existing facilities [maximum recycling efficiency] and a reliance on existing facilities at current capacities).
- Alternative 2A: CD&E - an increase in arisings based on economic growth (including a best case scenario, reflecting a maximum recycling efficiency estimate only).
- Alternative 2B: CD&E – an increase in arisings based on economic growth (including the worst case scenario, reflecting the capacity of existing facilities only).
- Alternative 3: (C&I) - a scenario that factors in local arising estimations only.

	Sustainability Objectives (SO)												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Alternative 1	0	0	0	0	0	0	0	0	+	0	0	0	0

Reason for rejection: Regarding inert waste, the Revised Preferred Approach (2015) approach to deriving a baseline figure for arisings assumed an increase in arisings during the Plan period based on a mid-range scenario of two scenarios reflecting the best and worst case of estimating arisings. This would be managed by a mid-range scenario between a theoretical uplift of capacity on existing facilities (maximum recycling efficiency) and a reliance on existing facilities at current capacities. This can be seen to run contrary to the waste chapter of Planning Practice Guidance (PPG), which states that 'Waste planning authorities should start from the basis that net arisings of construction and demolition waste will remain constant over time'. For this reason this alternative has been rejected.

	Sustainability Objectives (SO)												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Alternative 2A	0	0	0	0	0	0	0	0	/	0	0	0	0

Reason for rejection: This alternative would have issues through a reliance on existing facilities to

maximise their efficiency. This would also be dependent on significantly reconfiguring existing sites, which is unlikely to be viable across all sites, and it would also potentially have significant cost implications, with site reconfiguration not necessarily being suitable for environmental reasons on individual sites. For these reasons, the alternative was rejected.

Alternative 2B	0	0	0	0	0	0	0	0	0	-	0	0	0	0
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Reason for rejection: This alternative does not factor in any planned growth in the Plan Area or London, and is similarly inflexible to any changes in arisings within the Plan period. This would also be dependent on significantly refiguring existing sites, which is unlikely to be viable across all sites, would have significant cost implications, and may not be suitable for environmental reasons on individual sites. For these reasons, the alternative was rejected.

Alternative 3	0	0	0	0	0	0	0	0	0	+	0	0	0	0
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Reason for rejection: It has been identified within the NPPW that Greater London net imports to the Plan Area requires specific consideration and for this reason it is considered that the Plan’s approach must align with that forecasted in the adopted London Plan 2015. In addition, Essex County Council had been involved in the Duty to Co-operate process that governed the formation of the London Plan 2015 and it is now considered prudent to plan based on its forecasts. For these reasons, the alternative was rejected.

Alternative 1 was assessed as having no direct impacts on the majority of the Sustainability Objectives due to the differing impacts that may theoretically occur from the Policy’s many facility types required for the biological treatment for non-hazardous organic waste, the recovery of inert waste, the disposal of inert waste to landfill and the disposal of stable non-reactive hazardous waste. The approach was previously also appraised as having significantly positive impacts on the sustainable management of waste (SO9) due to its flexibility in adapting to possible changes over the Plan period and the principles of the Waste Hierarchy. Despite this, the re-assessment of this alternative highlights only minor positive impacts for this objective, where it is contrary to (national) Planning Practice Guidance.

Alternative 2A would have uncertain impacts on the sustainable management of waste (SO9) in the short to mid-term, although would have increasingly more positive impacts in the long term through increased efficiency of existing and newly allocated sites. Despite this, these positive impacts would be largely dependent on viability of significantly refiguring existing sites to maximise efficiency.

Alternative 2B reflects a scenario where the Plan does not allocate any new sites and relies on those that are currently existing recycling at current levels. There would be negative impacts on sustainable waste management (SO9) through this approach, where it does not factor in any planned growth in the Plan Area, or London, and is inflexible to any changes in arisings within the Plan period. Similar to Alternative 1A, these sites would have to significantly increase capacity to deal with any increase in arisings.

Alternative 3 estimates arisings based on a scenario where London’s waste is not imported into the Plan Area. Historically, London has exported considerable volumes of waste to Essex for disposal to landfill. It has been identified within the NPPW that Greater London net imports to the Plan Area requires specific consideration and for this reason it is considered that the Plan’s approach must align with that forecasted in the adopted London Plan 2015. In addition, Essex County Council had been involved in the Duty to Co-operate process that governed the formation of the London Plan 2015 and it is now considered prudent to plan based on its forecasts.

3.4.6 Alternatives Considered for C&I Wastes Forecasting Methodologies (Within Local Waste Arisings Addendum to the Replacement Waste Local Plan: Capacity Gap Report)

The approach to C&I forecasting has not changed between the Revised Preferred Approach (2015) stage Plan and the Pre-Submission Plan. Despite this, throughout the plan-making process, the following reasonable alternatives were considered, along with their reason for rejection. In each instance, the methodologies used as the basis of the following studies were explored for their suitability for use within the Local Plan making process:

- Alternative 1: East of England Regional Assembly – National study into commercial and industrial waste arisings 2006/07, 2009, ADAS (Estimates C&I waste arisings on the basis of the number of companies in each standard industrial classification sector for each Region).
- Alternative 2: Detailed Assessment of East of England Waste Arisings, East of England Regional Assembly, 2009 (broad picture of waste arisings in the East of England, using WasteDataFlow, Environment Agency's Regis Appended Tonnage System [RATS] database and Hazardous Waste Interrogator).
- Alternative 3: Commercial and Industrial Waste in the UK and Republic of Ireland, CIWM, 2013 (this study uses the breakdown of employees by sector from the Business Register Employment Survey 2009, estimating the tonnage of waste generated per employee for each sector grouping).
- Alternative 4: New Methodology to Estimate Waste Generation by the Commercial and Industrial Sector in England, Defra, 2014 (the overall approach involves a review of available data sources. The alternative methodologies within this respond to an arisings/survey based approach and a deposit/returns based approach).
- Alternative 5: Northern Ireland Commercial & Industrial (C&I) Waste Estimates, 2011 (the methodology used applies factors [waste per business] derived from the recently-published Defra study covering England: C&I waste survey 2009).
- Alternative 6: 2011 Waste Data Quality Report, SEPA/Natural Scotland, 2013 (the method used to estimate Scottish commercial and industrial waste arisings for 2011 is based on the use of SEPA regulatory data. It uses data from licensed/permitted site returns and complex exempt activities to provide estimates of arisings by business sector).
- Alternative 7: Decoupling of Waste and Economic Indicators, WRAP, 2012 (this research investigated trends of household, commercial, industrial, and construction and demolition waste arisings and key economic indicators in England, Scotland, Wales and Northern Ireland to see where decoupling has occurred).

	Sustainability Objectives (SO)												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Alternative 1	0	0	0	0	0	0	0	0	/	0	0	0	0
Reason for rejection: The alternative was considered to be stretching grossing methodology too far. The study, and the data used is now old and its uses are for comparison only. As such this alternative was rejected.													
Alternative 2	0	0	0	0	0	0	0	0	/	0	0	0	0
Reason for rejection: This alternative would have limited use due to a lack of capacity data across the range of the exempt sites data supplied. As such it would not be possible to perform a statistically valid survey of exempt sites within the region, and therefore it is not possible to gross													

this data up to take account of sites which were not surveyed or refused to take part.														
Alternative 3	0	0	0	0	0	0	0	0	0	/	0	0	0	0
Reasons for rejection: Although this alternative has some use in checking derived data, it was considered that there are significant gaps. The alternative does not account for C&I waste which may go through exempt sites. The quality and quantity of data on waste leaving sites is also less than that received, due to the fact that not all operators provide detailed information. As a result it is likely that not all waste that passes through one site to another is captured and therefore the overall waste managed figure is likely to be an overestimation. For these reasons this alternative was rejected.														
Alternative 4	0	0	0	0	0	0	0	0	0	/	0	0	0	0
Reasons for rejection: This alternative has been considered not robust, with too many un-evidenced assumptions with the revised estimate for 2009 being 21% less than that derived using waste surveys. The significant number of un-evidenced assumptions made to estimate gaps in data, especially regarding waste treated/transferred by operators under exemptions, ensured that this alternative was rejected.														
Alternative 5	0	0	0	0	0	0	0	0	0	/	0	0	0	0
Reasons for rejection: The alternative uses a C&I survey remodelling approach from the data collected in the Defra 2009 C&I study. The methodology would not be able relevant to the waste data collected from English businesses as it does not factor in the differences between Northern Ireland and England's business sectors. Results for waste management routes are not as robust due to differences in management options available in Northern Ireland in comparison with England and for this reason the alternative was rejected.														
Alternative 6	0	0	0	0	0	0	0	0	0	/	0	0	0	0
Reasons for rejection: A broader dataset is collected by SEPA in Scotland compared to England; data not directly transferable. It should also be noted that waste produced by a business in Scotland that is exported directly and does not pass through a Scottish waste management site will not be captured in the dataset. The scale of this missing data is not currently known. For these reasons, this alternative was rejected.														
Alternative 7	0	0	0	0	0	0	0	0	0	-	0	0	0	0
Reasons for rejection: The lack of data for C&I and C&D wastes in this methodology means that it would not be possible to derive any reliable conclusions on the relationship between waste and the economic performance of the sectors. There is evidence that waste prevention measures such as economic instruments, co-operation and information are effective in decoupling waste from economic drivers, but the evidence does not allow conclusions to be drawn on which measure or combination of measures is most effective; this will depend on an individual context, waste stream and sector. For this reason, the alternative was rejected.														

Alternative 1 looks at waste arisings by sector and company size as well as the material type by sector. Forecasts of future arisings are linked to the expected make-up of the future economy, although this has only been made for the East of England; the methodology required input from Regional Economic Models and only the East of England was able to provide such output. As such there will be uncertain impacts on the sustainable management of waste (SO9) due to the study being outdated and undertaken by an assembly which has since been abolished.

Alternative 2 will have uncertain impacts on the sustainable management of waste (SO9). Information for waste dealt with at exempt sites was obtained through a telephone survey based on a list of exempt sites provided by the Environment Agency. Data was also inputted from the re-

modelling of data from the North West of England Waste Arisings Survey in 2006. Uncertainty surrounds an assumption that a company of a certain type and certain size would create approximately the same amount of waste whether it was based in the North West or the East of England. This methodology does not factor in individual or specific sites, or those who did not wish to take part in the survey, which could yield forecasts that are not entirely reflective of the Plan Area. In addition, it is uncertain whether applying waste generation from an entirely different area of England would be valid.

Alternative 3 would have uncertain impacts on the sustainable management of waste (SO9) due to a significant degree of uncertainty regarding accuracy. Using the breakdown of employees by sector from the Business Register Employment Survey 2009, it estimates the tonnage of waste generated per employee for each sector grouping with waste generation projections on the rates of employment change. It does not however account for C&I waste which may go through exempt sites. As a result it is likely that not all waste that passes through one site to another is captured.

Alternative 4 would also have uncertain impacts on the sustainable management of waste (SO9) due to the methodology using a significant number of assumptions to estimate gaps in data, especially regarding waste that is treated and/or transferred by operators under exemptions.

Alternative 5 would again create uncertain impacts on the sustainable management of waste (SO9). The methodology has been created to factor in the large-scale structure of business in Northern Ireland and it is uncertain whether these could be applied in England. The methodology also does not take into account differences between Northern Ireland and England within a business sector.

Alternative 6 will also have uncertain impacts on SO9. The principle of this methodology was to count waste when it first entered the waste management system, at which point the producer can be determined. Uncertainty arises where missing data of waste that did not pass through a licensed/permitted or complex exempt site would be not accounted for.

Alternative 7 will have negative impacts on the sustainable management of waste (SO9). There is strong evidence of decoupling of household waste arisings and GDP which suggests that once GDP reaches a certain level, waste arisings will start to reduce (i.e. decoupling of waste from GDP occurs); however the evidence does not allow conclusions to be drawn as measures will depend on an individual context, waste stream and sector. There is also a lack of data for C&I and C&D wastes in this methodology

3.4.7 Alternatives Considered for CD&E Wastes Forecasting Methodologies

The following reasonable alternatives were considered, along with their reason for rejection:

- Alternative 1: East of England Construction and Demolition Waste Arisings – Final report, Aug 2009 (this approach was to develop a set of performance indicators based on waste arisings data from completed construction projects from BRE's SMARTWaste Plan and SMARTStart tools).
- Alternative 2: Study into Waste handled at Exempt Sites, East of England Waste Technical Advisory Body, March 2012 (this report explores the different data sources that exist and analyses the information from a telephone survey of companies operating in the East of England, including those operating mobile crushing equipment. Using this information, together with data from the Environment Agency, other national surveys and site waste management plans, the report attempts to assess the quantities that might be arising in the East of England).
- Alternative 3: Survey of Arisings and Use of Alternatives to Primary Aggregates in England, 2005 Construction, Demolition and Excavation Waste, DCLG, 2007 (two surveys were carried out during the spring and early summer of 2006, backed up by a programme of

other data analysis, to establish estimates for the arisings and use as aggregate of construction and demolition waste [CDEW] in England in 2005).

- Alternative 4: Construction, demolition and excavation waste arisings, use and disposal for England, WRAP, 2008 - Update on the 2007 DCLG survey (this approach was to run a limited survey; draw on information collected from its members by the National Federation of Demolition Contractors to provide a 'second opinion' on the state of the sector; make maximum use of data collected by the Environment Agency; collect targeted information from operators of waste treatment and transfer facilities; and run a formal survey of selected landfill operators).

	Sustainability Objectives (SO)												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Alternative 1	0	0	0	0	0	0	0	0	/	0	0	0	0
Reason for rejection: Potential double counting in excavation waste as the plan tool did not specify construction waste only, and so some may have included excavation waste. Could provide a specific estimate for each county / unitary authority (within East of England) for 2008 for all waste streams other than excavation. There are significant variations in some figures, including between mean and median – mean has been assumed to be representative of typical projects and the median would be representative of projects operating at good practice. The methodology also does not attempt to quantify waste from exempt activities. For these reasons, and due to the data being old, the alternative was rejected.													
Alternative 2	0	0	0	0	0	0	0	0	-	0	0	0	0
Reason for rejection: This piecemeal approach is considered insufficiently complete to provide a clear picture. Some level of response was received from a third of waste management and haulage companies. Many of these were unable or reluctant to provide detailed information on the quantity and origin of material that they handled. Most companies do not explicitly operate in the East of England, and therefore had difficulty in identifying the quantity or percentage of their work that was based in the East of England. SWMPs showed great variation in the quantities of waste arising from different projects, even when they are projects of the same type. New build projects were considered to be more consistent in the quantities of waste generated, but the extent of the variation was still too large to provide a meaningful standard level of arisings, either by quantity of built floor space or by the value of the project. For these reasons, in addition to a low participation rate, this alternative was rejected.													
Alternative 3	0	0	0	0	0	0	0	0	/	0	0	0	0
Reasons for rejection: This alternative was rejected as the survey response rates were insufficient to presume any regional or sub-regional focus. As such, the data is not considered accurate. The alternative was also rejected as the data is old and did not cover non-inert CDEW.													
Alternative 4	0	0	0	0	0	0	0	0	/	0	0	0	0
Reasons for rejection: This alternative involves the grossing up of the data from 80 respondents into a national picture. This was not considered fully representative of the national population of aggregate recyclers and was perhaps more indicative of those facilities that are in urban areas. As such, re-weighting was required before extrapolation which shows a degree of unreliability in the data received from surveys. There is also a considerable degree of inter facility movement which was maybe double counted. The alternative also does not provide a regional breakdown and for all the above reasons the alternative was rejected.													

Alternative 1 will have uncertain impacts on the sustainable management of waste (SO9) due to

the age of the data. The approach, in that it provides a specific estimate for each county / unitary authority (within East of England) for 2008 for all waste streams other than excavation, would not be reflective of the pressures on waste management arising from objectively assessed need and growth forecasts.

Alternative 2 will have negative impacts on the sustainable management of waste (SO9) as the primary source of data is from a telephone survey of companies that manage CDEW and many of these were unable or reluctant to provide detailed information on the quantity and origin of material that they handled. There was also a significant variation in the quantities of waste arising from different projects, even when they are projects of the same type and this would not provide a meaningful standard level of arisings, either by quantity of built floor space or by the value of the project.

Alternative 3 would have uncertain impacts on the sustainable management of waste (SO9) as the data is old and does not cover non-inert CDEW. It is recognised however that statistically the alternative is considered robust at a national level, although there are difficulties translating this into the Plan Area.

Alternative 4 would have uncertain impacts on the sustainable management of waste (SO9) in the Plan Area. This approach was to run a limited survey of inert CDEW recyclers and making use of data collected by the Environment Agency regarding site returns from operators of landfills, waste treatment and transfer facilities amongst other factors. Uncertainty surrounds the extent to which the survey respondents reflect aggregate recyclers in the Plan Area.

3.4.8 Alternatives Considered for Hazardous Waste Forecasting Methodologies

At the Revised Preferred Approach (2015) stage no alternatives were explored for the forecasting of hazardous waste in the Plan Area. The Revised Preferred Approach (2015) approach to calculating stable non-reactive hazardous waste arisings over the Plan period was to use data published by the Environment Agency. The Environment Agency holds significant information on hazardous waste management, published within the annual Hazardous Waste Interrogator. The quality of this data is considered good as the nature of the waste means that there is a requirement for its monitoring. This data quality, as well as the source and frequency of the data indicated that no alternatives could be considered reasonable at the time.

Despite this, the updated Waste Capacity Gap Report for the Pre-Submission Plan stage uses a different approach and more sophisticated analysis of inputs and outputs from principal Plan Area facilities. As such, the Revised Preferred Approach (2015) approach now corresponds to a reasonable alternative, and has been re-assessed.

- Alternative 1: the Revised Preferred Approach (2015) approach – to use those data returns published by the Environment Agency within their annual Hazardous Waste Interrogator only.

	Sustainability Objectives (SO)												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Alternative 1	0	0	0	0	0	0	0	0	+	0	0	0	0
Reason for rejection: At the RPA (2015) stage, the preferred approach to stable non-reactive hazardous waste arisings over the Plan period was to use those data returns published by the Environment Agency within their annual Hazardous Waste Interrogator, which looks at hazardous waste movements when they 'change hands' between producers and disposal / treatment facilities. The quality of this data was, and is, considered good due to the nature of the waste. Despite this, the Revised Preferred Approach (2015) did not factor in the figures from the Waste Data													

	Sustainability Objectives (SO)												
	1	2	3	4	5	6	7	8	9	10	11	12	13
<p>Interrogator (which additionally captures all hazardous waste movements) , or the EA Pollution Inventory (which also crucially captures hazardous waste arising from certain waste management facilities such as landfills and Energy from Waste plants). It should also be noted that the Revised Preferred Approach (2015) approach assumed that hazardous waste management facilities within the Plan Area merely resulted in the transfer of waste elsewhere. The Pre-Submission Plan also uses the Environment Agency’s Hazardous Waste Interrogator, although additionally also the Waste Data Interrogator and the EA Pollution Inventory in order to get a more accurate figure. There has also been a more sophisticated analysis of inputs and outputs from principal Plan Area facilities managing hazardous waste. For these reasons the previous Revised Preferred Approach (2015) approach was rejected.</p>													

Alternative 1 was initially assessed as having a significant positive impact on the sustainable management of waste (SO9). This was due to its flexibility in adapting to possible changes over the Plan period and the principles of the Waste Hierarchy. Despite this, the re-assessment of this approach highlights only minor positive impacts for this objective, where it does not factor in the full extent of hazardous waste movements or those from landfill or Energy from Waste plants.

3.4.9 Impacts on Indicators

The implementation of this Policy will impact on the following indicators:

- Tonnage recycled.
- Tonnage composted.
- Tonnage landfilled.
- Typical energy production (GwH) from Waste facilities.
- Typical amount of job creation (jobs per ha) within the waste industry.

3.4.10 Proposed Mitigation Measures / Recommendations

No mitigation measures have been recommended.

3.5 Safeguarding Existing Sites

Safeguarding will be implemented through Waste Consultation Areas which are defined around all permitted waste developments (as indicated in the Annual Monitoring Report) and sites allocated in this Plan. Proposed development, including that proposed in Local Plans, within 250m of a safeguarded site will be subject to consultation with the Waste Planning Authority. Waste Consultation Areas will be communicated to the Essex districts and the unitary authority of Southend-on-Sea Borough Council. Sensitive uses should not be located adjacent to, or within, 250 metres of any part of a safeguarded site. However, the actual buffer needed around each site will depend upon the nature of the proposed ‘sensitive’ use and on the specific impacts of the current waste operation.

There will be instances where a proposed non-waste use is considered unlikely to compromise the operation of an existing or future waste management facility operating within that safeguarded site. As such, the Plan sets out those development types which, when coming forward in Waste Consultation Areas, the Waste Planning Authority would not need to be consulted upon. Existing and allocated waste sites and infrastructure will be protected from inappropriate neighbouring developments that may prejudice their continuing efficient operation. Waste development is not

normally a high-value use in comparison with other land uses and as such the existing and allocated sites and facilities are safeguarded as they make an important contribution to the management of waste arising in Essex and Southend-on-Sea. Without a safeguarding policy, sites required to achieve a sustainable distribution of waste management facilities could be lost to other development. Sites covered by this policy that become vacant or where the existing waste use ceases operation, will continue to be subject to safeguarding.

In some cases, the loss of a site or facility may be acceptable, for example where it would enable the implementation of a town centre improvement strategy and it can be demonstrated that the wider social and/or economic benefits resulting from such a scheme outweigh the retention of the waste use. In such instances, alternative provision for the displaced waste use will be required should such capacity continue to be necessary.

The safeguarding provisions are generally not intended to apply to non-specialist, small scale waste operations, defined in this Plan as those with an annual capacity of 10,000 tpa or less.

3.5.1 Policy 2: Safeguarding Waste Management Sites and Infrastructure

Waste Consultation Areas

Where non-waste development is proposed within 250m of safeguarded sites, the relevant Local Planning Authority is required to consult the Waste Planning Authority on the planning application, except for those developments defined as 'Excluded' in Appendix C.

Non-waste development that would adversely impact on the operation of a safeguarded waste site or infrastructure (including site allocations within this Plan) could give rise to objection by the Waste Planning Authority unless:

- a) A temporary permission for a waste use has expired, or the waste management use has otherwise ceased, and the site or infrastructure is unsuitable for a subsequent waste use; or
- b) Redevelopment of the site or the loss of the infrastructure would form part of a strategy or scheme that has wider social and/or economic benefits that clearly outweigh the retention of the site or the infrastructure for waste use, and alternative provision is made for the displaced waste use, to be operational before the existing facility is lost; or
- c) A suitable replacement site or infrastructure has otherwise been identified and permitted.

Where proposed non-waste development gives rise to an objection from the Waste Planning Authority, it is expected that the proposed development would not be permitted.

3.5.2 Significant Effects

	Sustainability Objectives (SO)												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Short Term	/	/	/	+	/	/	/	+	++	+	+	+	++
Medium Term	/	/	/	+	/	/	/	+	++	+	+	+	++
Long Term	/	/	/	+	/	/	/	+	++	+	+	+	++

It should be noted that the safeguarding element of the previous Revised Preferred Approach

RWLP 2015 regarding safeguarding and Waste Consultation Zones (now Waste Consultation Areas to reflect appropriate terminology) has now been moved to the supporting text for this corresponding Policy in the Pre-Submission RWLP. This is not considered a significant change in approach and will not lead to any direct subsequent change in sustainability impacts as previously specified in the Sustainability Appraisal of the Revised Preferred Approach RWLP 2015.

A noticeable change from the Revised Preferred Approach (2015) is the removal of text that specified that regarding consultation with the relevant Local Planning Authority, the distance of 250m may be expanded or reduced depending on the specific nature of the site. Although this appears a significant omission from the Policy, words to a similar effect appear in the supporting text, which specifies that 'the actual buffer needed around each site will depend upon the nature of the proposed 'sensitive' use and on the specific impacts of the current waste operation.' In terms of the sustainability of this approach, there will be no significant change in the impacts presented in this Pre-Submission approach from those identified in the SA of the Revised Preferred Approach (2015); the difference is not considered to be distinct or give rise to any change of approach resulting from the implementation of the Policy. In addition, neither can the difference in Policy wording be considered distinct enough to be deemed a reasonably alternative approach for the purposes of the Sustainability Appraisal.

This approach has progressed from Alternative 3: Issues and Options (Issue 18) D – Around all waste management facilities; with the possible exemption of non-specialist, small scale waste operations, defined in the Plan as those with an annual capacity of 10,000 tpa or less. This approach will have a significant positive impact on SO9 regarding the sustainable management of waste. The approach has been broadly assessed as having uncertain impacts on the remaining Sustainability Objectives where they relate to local level issues and are more relevant to other policies in the Plan. These impacts have been explored in the appraisal of other Policies in the Plan and can be found elsewhere in this report.

There will be positive impacts on SO8 in the safeguarding of facilities that may include energy generation and also ensuring that neighbouring development does not conflict with this function through Waste Consultation Areas. There will also be positive impacts on SO10 through protecting facilities from any neighbouring development that may compromise the sustainable transportation of waste. Further positive impacts are associated with SO11 and SO12, where a degree of certainty is added to the Plan's generally flexible approach. Significant positive impacts will be realised for economic growth (SO13) in line with added flexibility regarding non-waste development in WCAs, specifically should there be wider economic benefits than the retention of the site or the infrastructure for waste use, and alternative provision is made for the displaced waste use. This element of the policy has been newly added to the policy since the Revised Preferred Approach 2015 consultation and is considered a more sustainable overall approach. The Plan's approach to safeguarding existing and allocated sites allows certainty regarding wellbeing, any impacts surrounding nuisance, and also employment opportunities regarding and resulting from strategic and non-strategic sites during the plan-period.

The SA of the previous Preferred Approach WDD (2010) stated that there may be negative impacts on SO4 (the sustainable use of land) where land may be restricted for certain development, where there can be assumed a conflict of neighbouring land uses that affect the operation of the waste facility. It went on to add however that the previous approach to Waste Consultation Zones did not limit the potential for neighbouring land to be developed, and that the impacts on SO4 would be uncertain and dependant on specific circumstances. The revised approach will have a positive impact on this objective through the requirements of the WPA to act as a consultee within the realms of national planning policy requirements to not prejudice land within waste consultation zones from being developed for other uses if it was deemed otherwise sustainable. In addition, the approach to WCAs and the WPA's subsequent role as set out is not intended to act as a barrier to any neighbouring development.

3.5.3 Temporal Effects

Although impacts will not differ over time, it should be noted that all the positive effects of sustainable waste management can exist in perpetuity as a result of this Policy. In particular it ensures economic certainty within the waste industry.

3.5.4 Secondary, Cumulative and Synergistic Effects

There will be secondary positive impacts on human health (SO11) and public nuisance (SO12). Although not the focus of the Policy, Waste Consultation Areas will indirectly protect neighbouring development from the impacts of waste facilities where presumably incompatible development will be directed to other sites post consultation from the WPA. The Policy ensures that any new development proposed within the WCAs would be objected to unless compatible with existing or future waste operations; however the WCAs themselves are also likely to act as a buffer to impacts perceived to be resulting from the waste facility.

3.5.5 Alternatives Considered

The following reasonable alternatives were considered for safeguarding, along with their reason for rejection

- Alternative 1: Issues and Options (Q23) A – Existing permanent permissions, consistent with WDD (now WLP) policies;
- Alternative 2: Issues and Options (Q23) B – Existing permanent permissions and waste plan site allocations with an area/capacity or strategic importance exceeding 3ha;
- Alternative 3: Issues and Options (Q23) C – Existing permanent permissions and waste plan site allocations with an area/capacity or strategic importance over 100,000tpa.

	Sustainability Objectives (SO)												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Alternative 1	/	/	/	/	/	/	/	+	++	+	+	+	/
Reason for rejection: Singularly, this approach was not deemed to adequately meet the capacity needs of the Plan Area because allocated sites may not be able to be delivered due to incompatible uses being established in their proximity in the future. For this reason the alternative was rejected as the sole approach to safeguarding.													
Alternative 2	/	/	/	/	/	/	/	+	++	+	+	+	+
Reason for rejection: Singularly, this approach would potentially discount otherwise sustainable sites based on their size only. Also the qualifying threshold for what was considered 'of strategic importance' may not be appropriate across the Plan Area in response to the Spatial Strategy and the need for safeguarding small-scale but important facilities, for example Transfer Stations. For this reason the alternative was rejected as the sole approach to safeguarding.													
Alternative 3	/	/	/	/	/	+	/	+	++	/	+	+	+
Reason for rejection: Singularly, this approach would potentially discount otherwise sustainable sites based on their throughput only. Also the qualifying threshold for what was considered 'of strategic importance' may not be appropriate across the Plan Area in response to the Spatial Strategy and the need for safeguarding small-scale but important facilities, for example Transfer Stations. For this reason the alternative was rejected as the sole approach to safeguarding.													

The three alternatives were considered in the WDD Issues and Options (2010) report. The approaches were appraised as broadly similar to those of the Policy, with significantly positive impacts highlighted for the sustainable management of waste consistent with the level of content and detail specified of the options. Since 2010, the approach to safeguarding has progressed in line with the preferred Spatial Strategy and identified sites. This has helped shape what the WPA considers important to the management of waste in the Plan Area. As such the general themes of the singular alternative approaches have evolved into that of the Pre-Submission approach to the Policy.

The Pre-Submission RWLP has used the plan-making process to allocate sites and then safeguard them through WCAs. Previously at the Issues and Options (2010) stage, safeguarding and the purpose of WCAs were identified as separate issues / policies. As such, during the plan-making process the following reasonable alternatives were considered for Waste Consultation Areas, along with their reason for rejection:

- Alternative 1: Issues and Options (Issue 18) B – To only safeguard those types of waste facilities which have greater potential for adverse effects on people and the environment;
- Alternative 2: Issues and Options (Issue 18) C – The number and extent of Waste Consultation Zones should be established by local planning authorities through Local Development Frameworks, to take account of local circumstances;

	Sustainability Objectives (SO)												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Alternative 1	0	0	0	/	0	0	0	+	+	+	0	0	0
Reasons for rejection: The alternative approach does not directly conform to the function of the Plan, or the WPA, in terms of safeguarding sites integral to waste management in the Plan Area. As such this approach was rejected.													
Alternative 2	0	0	0	/	0	0	0	/	/	/	0	0	0
Reasons for rejection: The determination of WCAs by district level LPAs would not have positive impacts for the sustainable management of waste in the Plan Area. Similarly, the issue is best managed at the appropriate tier due to extent of the Plan Area as a whole, the need for a strategic approach, and economies of scale. The notion is not compatible with the requirements of the NPPW and is beyond the remit of LPAs. For these reasons the approach was rejected.													

Alternative 1 – At the Issues and Options stage the SA deemed there to be positive impacts on SO8 in the safeguarding of Energy from Waste facilities. In addition to this, the approach would have positive impacts on the sustainable management of waste (SO9) and transport (SO10) through protecting facilities from any neighbouring development that may compromise the sustainable transportation of waste. Despite this, the alternative’s positive impacts could be viewed as secondary or indirect impacts resulting from an aim to protect human health in the first instance. Although there is a requirement to protect human health and ensure applications minimise such impacts, it is not the principle function of the Plan or the WPA.

Alternative 2 – At the Issues and Options stage the SA highlighted largely uncertain impacts, where the approach was seen as secondary to the function of the Plan. The identification of WCAs by district level LPAs in addition to their other development needs might not have positive impacts for the sustainable management of waste in the Plan Area. The notion is also not compatible with the requirements of the NPPW.

3.5.6 Impacts on Indicators

The implementation of this policy will impact on the following indicators:

- Distance of new waste management development to floodplains.
- New waste management development on PDL
- Typical energy production (GwH) from Waste facilities.
- Tonnage recycled.
- Tonnage composted.
- Tonnage landfilled.

3.5.7 Proposed Mitigation Measures / Recommendations

No mitigation measures have been recommended

4 Strategic Waste Management Allocations

The Local Plan sets out the policy for locating the range of waste management facilities required in the Plan area to 2032. The Plan meets the identified need for new capacity, set in the waste management capacity gap, by allocating strategic sites.

A variety of sites have been considered, as indicated in the Local Plan's site assessment methodology, prior to the identification of the allocated sites.

Regarding the allocations contained within the Plan at this stage, it is important to reflect on the Revised Preferred Approach RWLP (2015) consultation document, which stated that the then preferred sites identified in that consultation version of the Plan may not remain as such when the final (Pre-Submission) version of the Plan is prepared. Changes to the preferred sites from the Revised Preferred Approach (2015) stage have been due to new information emerging from the Revised Preferred Approach (2015) consultation, the Duty to Co-operate process and informal advice from PINS, which has changed the rating or assessment of some sites and also in response to updates to the Plan's evidence base.

The Plan's strategic site allocations meet the identified need for:

- Biological treatment (In-Vessel Composting facilities, Open Windrow Compositing facilities or Anaerobic Digestion [AD]);
- Inert waste recycling;
- Other waste management facilities;
- Inert landfill;
- Hazardous landfill.

All of the sites put forward for waste management facilities have been assessed and are presented in this Environmental Report. Those in this section respond to the sites that have been identified as allocated in the Plan. Alternatives to each allocation are appraised in detail in Chapter 7 of this report. Site appraisals have also been undertaken for facilities for which there is currently no identified requirement in the Plan. Such an approach has been undertaken in order to respond to any possible change in capacity needs for all waste streams throughout the plan-making process, emanating from any updates to the evidence base. The appraisal of sites in Chapter 7 corresponds to all those that have come forward from the Plan's call-for-sites, and also for the various different waste facilities or uses that were identified for each site at this stage by the landowner / developer. This thorough appraisal responds to the requirement for the Sustainability Appraisal to appraise all reasonable alternatives.

Due to this approach, this section looks at the allocated sites only. Chapter 7 of this report assesses the sustainability of each allocated site alongside all the reasonable alternatives put forward for that use for the purposes of comparison. Reasons for selection and rejection are also set out in that section and in Annex D which explores all alternatives explored throughout the plan-making process for all elements of the Plan since the Issues and Options stage in 2010.

It should be noted that, in addition to the allocations set out in Policy 3, there is a need to safeguard six permitted LACW transfer sites to support the Tovi EcoPark (Courtauld Road) IWMMF in Basildon in line with capacity requirements. These waste transfer stations were previously allocated within the Revised Preferred Approach RWLP (2015) however are now safeguarded in the Pre-Submission RWLP. This is due to their significant contribution in meeting the requirements for recycling and recovery, in ensuring waste is transported to the IWMMF site in Basildon and most importantly due to the fact that they are all now operational with planning permission. It should also be noted that there are no additional or subsequent impacts resulting from this move to safeguard the waste transfer stations in question than those identified to reflect their allocated status in the

revised Preferred Approach (2015) SA.

Regarding 'Other Waste Management', the Waste Disposal Authority is exploring long term options surrounding the final destination for the stabilised residual waste output of the Tovi Eco Park Facility. Currently the 200,000t output of the facility is exported from the Plan Area. A competitive tender process will identify the long-term management solution for this waste, which include continued exportation from the Plan Area. However, in line with net self-sufficiency, the Plan includes a site allocation which could accommodate this waste.

At the Revised Preferred Approach (2015) stage, two 'opportunity sites' were identified for 'other waste management', should they be required during the plan period. These were IWMF2 – Rivenhall, and W22 - Michelins Farm. At this Pre-Submission stage, W22 Michelins Farm has not been allocated, but instead been identified as an Area of Search in the Plan. The site has since been allocated by the District Council as an employment site to provide high quality office and industrial development including heavy industry. Although the concept of Opportunity Sites has been dropped following consultation, W22 Michelins Farm still meets the criteria of being allocated as an Area of Search and is therefore presented in that manner. Its designation as an Area of Search does not impact on its ability to accommodate a facility to manage this 'other waste'.

Please note that negative impacts highlighted in the SA respond to those that may potentially occur should they not be mitigated. Appendix B of the Plan identifies specific development principles which respond to the issues and opportunities relevant to each site. It should also be acknowledged that all allocations within the Plan would additionally have to adhere to the Development Management Policies also contained within the Plan, which seek to ensure that unacceptable impacts are minimised and mitigated in the first instance prior to or as a condition to development consent.

For more detail on the methodology behind the impacts presented for each site, please refer to the Site Pro-forma in Annex C accompanying this report.

4.1.1 Policy 3: Strategic Site Allocations

Waste management development at the following locations (see Proposals Map) will be permitted as follows and where proposals take into account the requirements identified in the relevant development principles (Appendix B 'Allocated Sites: Development Principles'):

1. For biological waste management at:

- Bellhouse Landfill Site, Colchester;
- Basildon Waste Water Treatment Works, Basildon;
- Courtauld Road, Basildon; and
- Rivenhall Airfield, Bradwell, Braintree.

2. For inert waste recycling at:

- Crumps Farm, Gt and Lt Canfield, Uttlesford;
- Elsenham, Uttlesford;
- Sandon East, Chelmsford;
- Slough Farm, Ardleigh, Tending;

- Blackley Quarry, Great Leighs, Chelmsford;
- Wivenhoe Quarry Plan Area, Tendring;
- Morses Lane, Brightlingsea, Tendring;
- Newport Quarry, Uttlesford.

3. For other waste management at:

- Rivenhall Airfield, Bradwell, Braintree.

4. For inert landfill:

- Little Bullocks Farm, Gt and Lt Canfield, Uttlesford;
- Slough Farm, Ardleigh, Tendring;
- Blackley Quarry, Gt Leighs, Chelmsford;
- Sandon, Chelmsford;
- Sunnymead, Elmstead & Heath Farms, Tendring;
- Newport Quarry, Uttlesford;

Finginghoe Quarry, Colchester;

5. For hazardous landfill at:

- Little Bullocks Farm, Gt and Lt Canfield, Uttlesford.

The sites above have been assessed below. Some site promoters put different options forward for biological treatment facilities, and the below appraisals show the impacts for AD where this has been put forward. This is because the impacts associated with AD (by nature an enclosed thermal facility) have appeared less positive than other biological treatment facilities in the appraisal of such in the SA. It is acknowledged that biological treatment may come forward as open air or enclosed facilities. For sites' impacts for open air and enclosed facilities, where relevant, please see their appraisal for specific facility types in Chapter 7.

4.1.2 Significant Effects of Biological Waste Management Allocations

Sites for: BIOLOGICAL WASTE MANAGEMENT														
Site Ref.	Temp Effect	Sustainability Objectives (SO)												
		1	2	3	4	5	6	7	8	9	10	11	12	13
W29 Bellhouse	S / M	/	-	++	++	/	-	/	/	+	+	--	++	++
	L	/	-	++	++	/	-	/	/	+	+	/	++	++
W3 Basildon WWTW	S / M	/	-	/	/	+	/	++	0	++	+	-	++	++
	L	/	-	/	/	+	/	++	0	++	+	/	++	++
W20 Courtauld Road	S / M	/	-	++	/	++	/	++	0	++	+	-	+	++
	L	/	-	++	/	++	/	++	0	++	+	/	+	++
IWMF2 - Rivenhall	S / M	+	-	++	-	++	-	++	++	++	+	--	++	++
	L	+	-	++	-	++	-	++	++	++	+	/	++	++

A capacity gap has been identified for biological waste treatment, increasing to 217,000 tonnes per annum by 2031/32. In line with the Government's preference for anaerobic digestion to recover material and energy from biological waste, sites proposing anaerobic digestion (AD) as well as sites proposing in-vessel (IVC) and open windrow (OWC) composting have been considered to meet the capacity gap for managing biological waste. As can be seen in the below table, the allocated sites have the appropriate capacity to meet the identified shortfall and as can be seen above, are all suitable for allocation for biological treatment.

Where promoters put different options forward for biological treatment on a single site, the facility with the greatest capacity has been included. This is due to some sites being able to treat a larger amount of waste with certain facility types. It is likely however, that only one biological treatment facility type per site will be acceptable.

Site	Estimated total capacity (tpa) of biological treatment facilities promoted on each site – provided by site promoter
W29 Bellhouse	75,000
W3 Basildon WWTW	25,000
W20 Courtauld Road	34,000
IWMF2 - Rivenhall	85,000
Total	219,000

As can be seen from the sites performance against SO13, regarding economic growth the allocated sites are well located for resultant employment opportunities and their proximity to key centres for growth. Significant positive impacts have also largely been predicted for the sustainable management of waste (SO9) through the positive planning history associated with the sites (i.e. there is no legacy of planning issues associated with them).

Significant negative impacts have been highlighted for objectives on two of the allocated sites.

These relate to health and well-being (SO11) associated with the loss of a PROW and proximity to properties at the W29 Bellhouse site, and similarly at the IWMF at Rivenhall. These will be addressed however through the development principles associated with each site, which relate to hours of operation and noise standards. The Environment Agency will also address any potential odour issues in the interests of protecting local amenity through managing the pollution control regime.

It should be noted that a change in a positive impact identified in the SA at the Revised Preferred Approach (2015) stage for IWMF2 – Rivenhall has been necessary at this stage regarding SO2 (water quality). This is due to a number of water bodies being within the existing adjacent operational quarry and the presence of a lake located north of the IWMF as part of the mineral restoration. The site has been identified as now having a potentially negative impact on water quality as identified. In addition, a significant negative impact was highlighted for flooding due to the site being partly within FZ2 and FZ3; however it has been re-assessed that the vast majority of the site sits within FZ1 - a very small portion of the access track to the site goes over a waterway (River Blackwater) designated as both FZ2 and FZ3 however, a bridge over the waterway significantly reduces the risk of the access road flooding. The site has also re-assessed as having significant positive impacts on the historic environment (SO5) where the listed and ancillary buildings at Woodhouse Farm are to be archaeologically recorded and renovated under the present approved application.

An amendment to the impacts previously highlighted in the SA of the Revised Preferred Approach (2015) regarding health and well-being (SO11) on Site W3 (Basildon WWTW) has also been made. This is due to there being sensitive receptors within 250m of the site. As such the previously highlighted uncertain impacts are now judged to be potentially negative. The site is also now recognised as being in FZ2 (previously erroneously judged to be in FZ1 for some uses) which sees an amendment to the impacts highlighted for flooding (SO3) as uncertain, where previously they were considered significantly positive. There will also now be uncertain impacts on landscape (SO6) for enclosed-thermal and open-air facilities as well as uncertain impacts on biodiversity due to the site being within 10km of internationally designated sites.

An amendment has also been necessary for the impact on water quality (SO2) previously stated on site W20 Courtauld Road. The alteration to the route of the Nevendon Brook now sees it run along the eastern boundary of the proposed site. As such previously significantly positive impacts are now negative due to the proximity of this water body. There will also now be an uncertain impact on landscape (SO6), and amendment to the previously stated positive impact, due to a re-assessment of the site for enclosed thermal facilities. This is also the case for biodiversity (SO1) due to a re-assessment of the site for enclosed thermal facilities due to the proximity of internationally designated sites.

4.1.3 Secondary, Cumulative and Synergistic Effects of Biological Waste Management Allocations

Secondary, cumulative and synergistic effects have been explored for allocated sites in a separate section of this report.

4.1.4 Alternatives Considered for Biological Waste Management Allocations

It should be noted that the Revised Preferred Approach (2015) RWLP planned to meet a higher capacity figure of approximately 309,000tpa within the Plan period. This was initially to be addressed through the allocation of two further sites (W7 – Sandon East, and SIE5 Basketworks). Since then, as W7 Sandon East scored significantly lower than the other four sites and those four sites on their own would provide sufficient capacity, the site has been discounted for biological

waste treatment. Site W7 Sandon has continued to be allocated for inert waste recycling in order to meet capacity gap requirements for inert waste recycling in the Chelmsford area – a key centre for growth in the Plan Area. Additionally, SIE5 Basketworks has been re-assessed since the Revised Preferred Approach (2015) stage as having negative transport impacts and subsequently failed Stage 2 of the Plan's site assessment criteria.

The full appraisals of these and all other promoted sites can be found in Chapter 7 alongside each site's reasons for rejection or selection.

4.1.5 Proposed Mitigation Measures / Recommendations for Biological Waste Management Allocations

In the SA of the Revised Preferred Approach (2015) it was recommended that mitigation measures should be incorporated where possible in a forthcoming site related policy post-consultation, due to significant negative impacts having been highlighted for health and well-being (SO11). This was associated with the loss of a PROW and proximity to properties at the W29 Bellhouse site. It should be noted that the development principles stated for this site in the Pre-Submission Plan include those related to hours of operation and noise standards. It should also be noted that the Environment Agency will also address any potential odour issues in the interests of protecting local amenity. It is considered at this stage that the recommendations of the SA have been successfully factored into the Plan.

4.1.6 Significant Effects for Inert Waste Recycling Allocations

Sites for: INERT WASTE RECYCLING														
Site Ref.	Temp Effect	Sustainability Objectives (SO)												
		1	2	3	4	5	6	7	8	9	10	11	12	13
W32 Crumps Farm	S / M	/	-	--	-	/	-	/	0	+	+	/	++	+
	L	/	-	--	-	/	-	/	0	+	+	/	++	+
W8 Elsenham	S / M	+	++	++	/	-	-	/	0	+	+	-	++	/
	L	+	++	++	/	-	-	/	0	+	+	/	++	/
W7 Sandon East	S / M	+	-	--	/	+	+	++	0	++	/	-	+	++
	L	+	-	--	/	+	+	++	0	++	/	/	+	++
L(n)1R Slough Farm	S / M	+	-	++	++	/	/	++	0	+	/	-	+	++
	L	+	-	++	++	/	/	++	0	+	/	/	+	++
L(i)10R Blackley (Site 1)	S / M	+	-	++	++	+	/	++	0	+	+	--	++	++
	L	+	-	++	++	+	/	++	0	+	+	/	++	++
W13 Wivenhoe Quarry	S / M	/	-	++	-	++	/	/	0	++	/	--	+	++
	L	/	-	++	-	++	/	/	0	++	/	/	+	++
W31 Morses Lane	S / M	+	++	++	/	/	/	/	0	++	+	-	++	++
	L	+	++	++	/	/	/	/	0	++	+	/	++	++
L(i)17R Newport Quarry	S / M	/	-	++	-	+	++	++	0	+	/	-	+	+
	L	/	-	++	-	+	++	++	0	+	/	/	+	+

Construction, Demolition and Excavation waste can be processed and reused / recycled as a construction material. Whilst the resultant material is typically lower grade, recycled inert material can still often act as a substitute for freshly excavated material. Due to the fact that this waste can be processed and / or re-used for its original use, it can fall under the 'Re-use' or 'Recycling' tier of the Waste Hierarchy. Recycling processes involve the removal of materials such as wood, plastic and metal, a process that can be carried out at both enclosed and open-air facilities. Locally collected evidence suggests that there is further diversion from landfill through beneficial re-use of inert waste, which equated to approximately 765,000tpa in 2014. It is estimated that there is a current inert landfill void space of approximately 3.4 million m³, which would equate to approximately 5.1 million tonnes of CDE disposal capacity. This is, however, not sufficient to accommodate the forecasted need for inert landfill over the Plan period. To address this, 405,000tpa of inert waste recycling capacity and 9.52million m³ of inert waste disposal capacity is allocated in the Plan.

Site	Estimated total capacity (tpa) of inert waste recycling facilities – provided by site promoter
W32 Crumps Farm	80,000tpa
W8 Elsenham	40,000tpa
W7 Sandon East	40,000tpa
L(n)1R Slough Farm	40,000tpa
L(i)10R Blackley (Site 1)	75,000tpa
W13 Wivenhoe Quarry	40,000tpa
W31 Morses Lane	75,000tpa
L(i)17R Newport Quarry	15,000tpa
Total	405,000tpa

It should be noted that because detailed proposals for inert recycling will only come forward at the planning application stage rather than at this site allocation stage, submitted sites were assessed through the Local Plan-making process on the basis that the facility would be open air. This decision was taken as it was considered that an open-air facility would likely have more potential amenity impact than if it was enclosed, so essentially a 'worse-case scenario' was assessed.

There will be at least one positive impact realised for each of the Sustainability Objectives, apart from that which looks at energy generation (SO8) which is not applicable to waste recycling. General significant positive impacts will be realised for the sustainable use of land (SO4), air quality (SO7), nuisance and access (SO12) and employment opportunities (SO13) associated with locations in proximity to key towns and centres for growth.

There will be significant negative impacts associated with flooding (SO3) resulting from the allocation of site W7 – Sandon and W32 – Crumps Farm. This is due to portions of the sites being in Flood Zone 3 and effective mitigation will be required. The sites L(i)10R and W13 will also have negative impacts on well-being (SO11) resulting from their respective locations in proximity to nearby properties which is likely to require mitigation, and also health (also SO11) associated with the loss of a PROWs. These highlighted impacts, as well as those for other negative impacts stated for W32 Crumps Farm are considered adequately covered / mitigated by the issues to address in the stated development principles for each site.

An amendment has been made since the SA of the Revised Preferred Approach (2015) regarding historic environment impacts at W8 - Elsenham. Uncertain impacts were previously highlighted for certain facility types due to moderate issues regarding the historic environment (SO5), however a re-assessment of the site has led to a major impact issue (which may be acceptable subject to mitigation) being highlighted for all facility types. As such impacts are now negative.

Another amendment concerns W31 Morses Lane and the previous positive impact stated for the sustainable management of waste (SO9). This has been amended to a significant positive impacts associated with its positive waste use / permission history.

W32 Crumps Farm will see an amendment from the Revised Preferred Approach (2015) SA. This responds to impacts regarding the sustainable management of waste (SO9) and an amendment from the significantly positive impact previously stated to a minor positive. This has been reassessed due to parts of the site not having relevant planning / history.

4.1.7 Secondary, Cumulative and Synergistic Effects of Inert Waste Recycling Allocations

Secondary, cumulative and synergistic effects have been explored for allocated sites in a separate section of this report.

4.1.8 Alternatives Considered for Inert Waste Recycling Allocations

The Revised Preferred Approach (2015) stage stated that a total of up to 1.27 million tonnes per annum (mtpa) of new inert waste management capacity would be required by 2031/32 (note that that was a total figure for the waste stream and did not differentiate between what would be required or appropriate for recovery and disposal) assuming that the proportions of waste currently treated and sent for beneficial re-use are maintained at the then present levels. This is lower than the Pre-Submission figure of 1.5mtpa.

Given the scale of the potential capacity gap for CD&E Waste recycling, at the Revised Preferred Approach (2015) stage the Council initially allocated an additional inert recycling site that was previously held back at Stage 2 (W19 London Road). Stage 2 was an initial sieving exercise that identified sites with either significant transport issues or those located in the Green Belt. Despite being located in the Green Belt, W19 was at that stage deemed to have fewer other negative impacts than the sites for inert recycling that passed Stage 2. At this Pre-Submission stage however, the decision has been reversed so as not to allocate this site due to its location in the Green Belt which is consistent with other sites that also failed Stage 2 for this reason.

Evidence informing the Pre-Submission stage, including the updated Waste Capacity Gap Report (2016), has led to L(n)7R Little Bullocks A22 also being rejected. This was a site previously allocated in the Revised Preferred Approach (2015) Plan. This site has now been rejected in favour of another site, W32 Crumps Farm, which also forms an extension to the existing Crumps and Little Bullocks Farm operation. The site promoter put forward three proposals for inert recycling in the same broad location: L(n)7R, Ln8R and W32. The Site Assessment Report assessed all three sites as suitable for inert recycling. The WPAs however do not consider that three separate inert waste facilities at each of these three sites within the Little Bullocks / Crumps Farm operation would be capable of operating simultaneously from a practical standpoint and without some level of cumulative impacts associated with the nature of inert recycling operations. For this reason, only one of the proposed sites has been included as a preferred site allocation for inert waste recycling. W32 Crumps Farm has been chosen because it provides for the most efficient use of the total waste site in conjunction with other existing and permitted operations. It has the largest potential capacity of the three proposals (80,000tpa compared to 55,000tpa for the next largest on Site 1 - L(n)7R), is also located closer to the highway and would not displace any part of landfill operation on L(n)7R. L(n)8R is a less appropriate location for an inert recycling operation and has been selected for taking hazardous waste as the only site promoted for this through the plan-making process.

At this Pre-Submission stage, the sites of W13 Wivenhoe Quarry and a new site, L(i)17R Newport Quarry (a proposal submitted during the Revised Preferred Approach consultation), have been allocated. Previously W13 Wivenhoe was promoted for AD, however since the Revised Preferred Approach (2015) consultation, the site owner / developer has specified that AD is no longer promoted for consideration on the site, requiring the WPAs to drop its allocation for this facility type. For inert recycling the site scored highly, and has been allocated in order to divert waste away from landfill in accordance with the Waste Hierarchy. For this reason also, L(i)17R Newport Quarry has been allocated.

The full appraisals of these and all other promoted sites can be found in Chapter 7 alongside each site's reasons for rejection or selection.

4.1.9 Proposed Mitigation Measures / Recommendations for Inert Waste Recycling Allocations

In the SA of the Revised Preferred Approach (2015) it was recommended that significant negative impacts associated with flooding (SO3) resulting from W7 Sandon, due to portions of the site being in Flood Zone 3 would require effective mitigation. This issue is sufficiently covered by the development principles associated with this site (as expressed in Appendix B of the Plan). Mitigation was also recommended for L(i)10R regarding the site's negative impact on well-being (SO11) resulting from its location to nearby properties. This has been addressed in the development principles for the site which state that dust mitigation measures, limits on duration (hours of operation) and noise standards (from noise sensitive properties) will be established in the interests of protecting local amenity. The approach taken by the WPAs to cover these issues in policy and development principles can be seen to have successfully factored in the recommendations of the Revised Preferred (2015) stage SA.

4.1.10 Significant Effects of the Other Waste Management Allocation

Site for: OTHER WASTE MANAGEMENT														
Site Ref.	Temp Effect	Sustainability Objectives (SO)												
		1	2	3	4	5	6	7	8	9	10	11	12	13
IWMF2 Rivenhall	S / M	+	-	++	-	++	/	++	++	++	+	--	++	/
	L	+	-	++	-	++	/	++	++	++	+	/	++	/

It should be noted that the site at Rivenhall Airfield was nominated through the Plan's call for sites process and judged to be suitable for waste management purposes. The site has now been allocated for biological treatment, and in recognition of the further value of the site to divert waste away from landfill the Plan has been allocated for 'other waste management'.

At the Revised Preferred Approach (2015) stage it was deemed necessary to re-consider how the proposed IWMF at Rivenhall should fit within the context of the RWLP. The Rivenhall IWMF permission remains extant and an application to extend the permission until March 2016 has been recently granted through the Development Management process. It has been allocated in the Plan for biological treatment, but other portions of the site have been allocated for other waste management, commensurate to the sites performance within the Site Assessment Report and it's suitability for a range of different facility types, should their need be forthcoming over the plan period.

There will be significant positive effects on air quality (SO7), energy generation (SO8) and the sustainable management of waste (SO9) resulting from the allocation although it should be acknowledged that the site assessment criteria for air quality does not consider those impacts associated with potential energy from waste facilities. The site will also have significantly positive impacts on minimising the impacts on health and well-being (SO12).

It should be noted that a change in a positive impact identified in the SA at the Revised Preferred Approach (2015) stage for IWMF2 – Rivenhall has been necessary at this stage regarding water quality (SO2). This is due to a number of water bodies being within the existing adjacent operational quarry and the presence of a lake located north of the IWMF as part of the mineral restoration. The site will now have a negative impact on water quality as identified. In addition, a significant negative impact was highlighted for flooding due to the site being partly within FZ2 and FZ3; however it has been re-assessed that the vast majority of the site sits within FZ1 - a very small portion of the access track to the site goes over a waterway (River Blackwater) designated

as both FZ2 and FZ3 however, a bridge over the waterway significantly reduces the risk of the access road flooding. The site has also re-assessed as having significant positive impacts on the historic environment (SO5) where the listed and ancillary buildings at Woodhouse Farm are to be archaeologically recorded and renovated under the present approved application.

A negative impact on well-being (SO11) will exist for the IW MF due to the proximity of nearby properties, which will require mitigation, and health (SO11) due to the loss of a PROW. This will amount to a significant negative impact on SO11. Minor negative impacts also exist regarding the fact that the site is on greenfield / agricultural land (SO4).

4.1.11 Secondary, Cumulative and Synergistic Effects of the Other Waste Management Allocation

Secondary, cumulative and synergistic effects have been explored for allocated sites in a separate section of this report.

4.1.12 Alternatives Considered for the Other Waste Management Allocation

At present, the Waste Disposal Authority is exploring long term options surrounding the final destination for the stabilised residual waste output of the Tovi Eco Park Facility. Currently the 200,000t output of the facility is exported from the Plan Area. A competitive tender process will identify the long-term management solution for this waste, which includes continued exportation from the Plan area. However, in line with net self-sufficiency, the Plan includes a site allocation which could accommodate this waste.

Of those sites that passed Stages 1 and 2 only W3 Basildon WwTW and W31 Morses Lane scored better than IW MF Rivenhall. However, while close to the source of waste W3 Basildon is considered to be too small a site to accommodate a facility of the nature needed to meet this specific need. It is noted in the commentary (of the Site Assessment Report) for W31 that should an EfW facility have flues it would score red given the high number of residential neighbours within 250m of the site. Another factor in taking IW MF2 Rivenhall forward is, given the scale of the permitted facility, it has potential for accepting commercial and industrial wastes that may be surplus to the needs of the Plan Area.

The full appraisals of these sites can be found in Chapter 7 alongside their reasons for selection or rejection.

4.1.13 Proposed Mitigation Measures / Recommendations for the Other Waste Management Allocation

At the Revised Preferred Approach (2015) stage, it was stated that a negative impact on well-being (SO11) will exist for IW MF2 due to the proximity of nearby properties, which will require mitigation. The development principles for the site, as listed in Appendix B of the Plan, state that dust mitigation measures, limits on duration (hours of operation) and noise standards (from noise sensitive properties) will be established in the interests of protecting local amenity. As a result, the recommendation of the AS has been successfully factored into the Plan.

4.1.14 Significant Effects of Inert Landfill Allocations

Sites for: INERT LANDFILL														
Site Ref.	Temp Effect	Sustainability Objectives (SO)												
		1	2	3	4	5	6	7	8	9	10	11	12	13
L(n)7R Little Bullocks A22	S / M	/	--	--	++	/	/	/	0	+	+	--	++	+
	L	/	--	--	/	0	/	0	0	0	0	/	0	0
L(n)1R Slough Farm	S / M	+	--	++	++	/	/	++	0	+	/	--	+	++
	L	/	--	++	/	0	/	0	0	0	0	/	0	0
L(i)10 Blackley (Site 1)	S / M	+	--	++	++	+	/	++	0	+	+	--	++	++
	L	/	--	++	/	0	/	0	0	0	0	/	0	0
L(i)6 Sandon	S / M	-	--	--	++	+	/	++	0	++	/	--	++	++
	L	/	--	--	/	0	/	0	0	0	0	/	0	0
L(i)5 Sunnym- ead	S / M	/	--	++	++	/	++	/	0	+	/	--	+	++
	L	/	--	++	/	0	/	0	0	0	0	/	0	0
L(i)17R Newport Quarry	S / M	/	--	++	-	+	++	++	0	+	/	--	+	+
	L	/	--	++	/	0	/	0	0	0	0	/	0	0
L(n)5 Bellhou- se	S / M	/	--	++	++	+	+	/	0	++	+	--	++	++
	L	/	--	++	/	0	/	0	0	0	0	/	0	0
L(i)15 Fingring- hoe	S / M	/	--	++	/	+	++	++	0	++	++	--	++	++
	L	/	--	++	/	0	/	0	0	0	0	/	0	0

Final disposal as a means of managing waste is the least desirable solution, reflected in its position in the waste hierarchy, and should only be explored when other options are not appropriate.

Recycling processes involve the removal of materials such as wood, plastic and metal, a process that can be carried out at both enclosed and open-air facilities. Locally collected evidence suggests that there is further diversion from landfill through beneficial re-use of inert waste, which equated to approximately 765,000tpa in 2014. It is estimated that there is a current inert landfill void space of approximately 3.4 million m³, which would equate to approximately 5.1 million tonnes of CDE disposal capacity. This is, however, not sufficient to accommodate the forecasted need for inert landfill over the Plan period. To address this, 405,000tpa of inert waste recycling capacity and 9.52million m³ of inert waste disposal capacity is allocated in the Plan.

Site	Estimated total capacity (tpa) of inert waste recycling facilities – provided by site promoter
L(n)7R Little Bullocks A22	420,000m ³
L(n)1R Slough Farm	1,000,000m ³
L(i)10 Blackley (Site 1)	1,400,000m ³
L(i)6 Sandon	1,000,000m ³
L(i)5 Sunnymead	1,800,000m ³
L(i)17R Newport Quarry	300,000m ³
L(n)5 Bellhouse	3,000,000m ³
L(i)15 Fingringhoe	600,000m ³
Total	9,520,000m ³

It can be seen that the allocated sites adequately address the shortfall in inert landfill capacity of 9.52million m³. In addition to the 405,000tpa inert recycling capacity allocated in the Plan, this can be seen to satisfy the overall shortfall for inert waste management of 1.5mtpa as evidenced in the updated Waste Capacity Gap Report and reiterated in Policy 1 of the Plan.

The Preferred Sites above will have significant positive impacts on the sustainable use of land (SO4), and employment opportunities (SO13) associated with proximity to key centres for growth in the Plan Area. The sites will also largely have significant positive impacts associated with minimising flooding (SO3), impacts on air quality (SO7), nuisance and access (SO12) and the sustainable management of waste (SO9).

There will however be significant negative impacts on water quality (SO2) arising from all of the sites for inert landfill. This is largely due to issues surrounding adjacent water bodies. Each site has also been assessed as having a significantly negative impact on well-being (SO11) due to sensitive receptors being within 250m of the site. Please note that these are existing minerals extraction sites and there will be no additional effects that are not already experienced and there will also be no bioaerosols generated through this type of landfill. It should also be acknowledged that the qualifying criterion for this impact regarding landfill sites is one property or over within this distance, which is likely to be relatively easily mitigatable.

Site L(i)6 at Sandon has been predicted to have significant negative impacts on flooding (SO3) due to a proportion of the site being within flood zone 3. This proportion is very small however in comparison to the total size of the site and the planning permission of the current operation on the site ensures that there will be no impacts resulting from the allocated use.

It should be noted that a change in a significant positive impact identified in the SA at the Revised Preferred Approach (2015) stage for L(n)5 – Bellhouse has been necessary at this stage regarding SO6 (landscape). This is due to a re-assessment which has established that there would be a minor adverse effect regarding views from receptors (properties and a PROW).

There is also an amendment from the SA of the Revised Preferred Approach (2015) regarding an erroneous impact on the sustainable management of waste (SO9) at site L(n)7R – Little Bullocks Farm Site A22. This is due to the site being Greenfield land with no planning history within the specific red-line boundary of the site. As such, the significant positive impact highlighted at the Revised Preferred Approach (2015) stage SA has been amended to be a minor positive impact. In addition, the site was also previously erroneously judged to have significant positive impacts on

flooding (SO3) for certain uses / facilities, however a small amount of the site is within FZ3. As such the site will now have significantly negative impacts on this objective. A re-assessment of the site now also indicates that there will moderate impacts on landscape which will give rise to an uncertain impact on landscape (SO6); an amendment of a significantly positive score highlighted in the SA at the Revised Preferred Approach (2015) stage.

4.1.15 Secondary, Cumulative and Synergistic Effects of Inert Landfill Allocations

Secondary, cumulative and synergistic effects have been explored for allocated sites in a separate section of this report.

4.1.16 Alternatives Considered for Inert Landfill Allocations

At the Revised Preferred Approach (2015) stage, the sites of L(i)10 Blackley (Site 1), L(n)7R Little Bullocks A22, L(n)1R Ardleigh (Slough Farm), L(i)6 Sandon and L(i)5 Sunnymead were selected as the preferred sites for inert waste landfill.

Since then, L(n)5 Bellhouse has also been selected. This site was previously rejected as, despite scoring well in the Site Assessment Report and thus being deemed suitable for the landfilling of inert material, 'to allocate this site, in addition to other sites in the immediate area (such as the existing site - L(i)7 Stanway Fiveways Fruit Farm), would unnecessarily result in a concentration of inert landfill capacity in the local area (i.e. there would be cumulative impacts).' At the Pre-Submission stage it has been deemed prudent to include the L(n)5 Bellhouse site (which currently takes non-hazardous wastes and has an agreed restoration plan) as an inert landfill site due to the re-assessment of the overall needs of the Plan Area and also in consideration of its capacity and a need to assist in the site's restoration.

L(i)15 Fingringhoe Quarry has also now been included after its previous rejection at the Revised Preferred Approach (2015) stage. The site was previously excluded as it had been assumed that the inert fill material to be used at this site would have to be entirely sourced from London via barge at Ballast Quay Wharf; the highway infrastructure being unsuitable for more local sourcing of inert fill material. Since then the site promoter, through their representation (through the Revised Preferred Approach [2015] consultation) and subsequent correspondence, has been able to satisfy the Waste Planning Authorities that a reasonable portion of inert fill material to be used at this site can be sourced from within the Plan Area. For this reason, and the fact that an existing mineral void exists at the quarry, the site has now been allocated to contribute in meeting void space requirements.

Lastly, L(i)17R Newport Quarry has also been included. This site was put forward during the Revised Preferred Approach (2015) consultation. The Site Assessment Report indicates that the site scores well for inert landfill and its selection contributes to meeting the revised capacity gap requirements, and contributes to spatial distribution by allocating a site in the west of the Plan Area.

The need for an additional three sites (from those preferred sites in the revised Preferred Approach [2015] Plan) to be included for allocation at this stage responds to the capacity gap requirements as specified in Policy 1 of the Plan and the updated Waste Capacity Gap Report.

Following inert waste recycling allocations (with a combined capacity of 405,000tpa), there is a further need to find management solutions for the remainder of the inert waste shortfall over the Plan period. No other submitted proposals have been deemed suitable for the management of inert waste in the Plan Area although locational criteria policies provide the means by which future inert waste management proposals can be assessed. This leaves a requirement for disposal. It should additionally be noted that despite the allocation of an additional three sites from those preferred at

the Revised Preferred Approach (2015) stage, there is still a slight deficit scenario.

The full appraisals of these sites can be found in Chapter 7 of this report alongside their reasons for rejection.

4.1.17 Proposed Mitigation Measures / Recommendations for of Inert Landfill Allocations

Each site has been assessed as having a significantly negative impact on well-being (SO11) due to sensitive receptors being within 250m of each site although it should be noted that these are existing minerals extraction sites and there will be no additional effects that are not already experienced and there will also be no bioaerosols generated through this type of landfill. Never the less in individual cases it may be necessary to re-examine the need for mitigation at the planning application stage. It should be acknowledged though, that the qualifying criterion for this impact regarding landfill sites is one property or over within this distance, which is likely to be relatively easily mitigatable.

Site L(i)6 at Sandon has been predicted to have significant negative impacts on flooding (SO3) due to a proportion of the site being within flood zone 3. This proportion is very small however in comparison to the total size of the site and the planning permission of the current operation on the site ensures that there will be no impacts resulting from the allocated use.

4.1.18 Significant Effects of the Hazardous Landfill Allocation

Sites for: (STABLE NON-REACTIVE) HAZARDOUS WASTE LANDFILL														
Site Ref.	Temp Effect	Sustainability Objectives (SO)												
		1	2	3	4	5	6	7	8	9	10	11	12	13
L(n)8R Little Bullocks	S / M	/	--	++	++	+	-	/	0	+	+	--	++	/
	L	/	--	++	/	0	/	0	0	0	0	/	0	0

Hazardous Waste landfills are licensed to accept hazardous wastes. These are wastes that can pose substantial or potential threats to public health or the environment if improperly managed. Such wastes include asbestos and contaminated soils. For hazardous waste that must be dealt with at very specialist facilities, Essex relies on facilities outside the Plan Area and the evidence base which supports the Pre-Submission Plan suggests that this can continue.

Some non-hazardous landfill sites are however able to take certain Stable Non-Reactive Hazardous Wastes (SNRHW) within a designated cell. Roxwell landfill, previously the only such site in the Plan Area, closed following its completion in April 2014. This means that at present, there is no landfill void space for SNRHW within the Plan Area, and all of the waste that was previously deposited at Roxwell is currently being disposed of outside the Plan Area. Due to this change in circumstances there is a need to re-consider whether further void space can be provided in order to contribute to net self-sufficiency. A site submitted as part of the Call for Sites (2014) included a proposal for a SNRHW cell. This proposal has been assessed through the site assessment methodology and the Sustainability Appraisal, and the Policy allocates of this site to ensure that there is sufficient capacity for the disposal of SNRHW arising within the Plan Area.

The Site Assessment Report states that additional hazardous treatment and disposal capacity may only be required within the Plan Area if there is no long-term provision at the installations currently used in adjacent authorities. There is however a presumption in the NPPW / PPG that WPAs seek to identify sufficient opportunities to meet the identified needs of their Plan Area for the

management of waste streams including hazardous. While finding suitable facilities for the entire hazardous waste stream may be problematic within the Plan Area it may be possible at least for SNRHW. There was only one Stable Non-Reactive Hazardous Waste or SNRHW landfill cell promoted during the call for sites processes at L(n)8R Little Bullocks Farm Site A23 (Uttlesford), and this has been submitted as having the potential to accept 30 thousand tonnes per annum. Therefore L(n)8R Little Bullocks Farm has been allocated as an SNRHW cell.

There will be significant positive impacts associated with minimising flooding (SO3) as the site is within flood risk zone 1. Similarly there will significant positive impacts associated with minimising nuisance and access (S012) due to the site's access possibilities.

There will however be a significant negative impact associated with water quality (SO2) due to the site lying adjacent to small brook and the risk of contamination associated with all landfill proposals. It is acknowledged however that this is likely to be easily mitigated due to the precautions surrounding such waste. The site will also have a negative impact on well-being (SO11) associated with a small number of properties within 250m of the site boundary and health (also SO11) associated with the site containing a PROW. Together these impacts combine to a significant negative impact. The impact on sensitive receptors should be mitigated within any forthcoming planning application in accordance with the site's development principles.

There is an amendment from the SA of the Revised Preferred Approach (2015) regarding an erroneous impact on the sustainable management of waste (SO9) at site L(n)8R. This is due to the site being Greenfield land with no planning history within the specific red-line boundary of the site. As such, the significant positive impact highlighted at the Revised Preferred Approach (2015) stage SA has been amended to be a minor positive impact. A re-assessment of the site now also indicates that there will moderate to major effects on landscape which will give rise to a negative impact on SO6; an amendment of an uncertain score highlighted in the SA at the Revised Preferred Approach (2015) stage.

4.1.19 Secondary, Cumulative and Synergistic Effects of the Hazardous Landfill Allocation

There will be no secondary, cumulative or synergistic effects resulting from this site due to it being the only site that came forward for such a facility. General cumulative impacts across all the Preferred Sites is explored in section 4.6 of this report.

4.1.20 Alternatives Considered for the Hazardous Landfill Allocation

There was only one Stable Non-Reactive Hazardous Waste or SNRHW landfill cell promoted during the call for sites processes at L(n)8R Little Bullocks Farm. As no other sites came forward, it can be considered that there are no reasonable alternatives on grounds of viability.

4.1.21 Proposed Mitigation Measures / Recommendations for the Hazardous Landfill Allocation

Site L(n)8R will have a negative impact on well-being (SO11) associated with a small number of properties within 250m of the site boundary. It was stated within the SA of the Revised Preferred Approach (2015) that this impact on sensitive receptors should be mitigated within any forthcoming site specific policy in future iterations of the Plan. At the Pre-Submission stage it is considered that the development principles formulated for this site as stated in Appendix B of the Plan adequately address this recommendation.

4.2 Cumulative Impacts of the Site Allocations

Cumulative impacts are most appropriately explored by looking at impacts by theme, or by concentration in an area. As such, this section explores those cumulative and synergistic impacts of the strategic site allocations by:

- Sustainability Objective; and
- By broad area.

4.2.1 Cumulative Impacts of the Strategic Site Allocations by Sustainability Objective

This section looks at the combined impacts of the allocated sites per Sustainability Objective. This goes some way to highlight the cumulative and synergistic impacts of all the sites in total. These impacts are elaborated on and explained in the corresponding commentary. The following table indicates the proportion (and number) of all sites that have a specific impact on each Sustainability Objective.

Table 5: Cumulative Impacts of all Preferred Sites by Sustainability Objective

Sustainability Objectives (SO)	Cumulative Impacts of all Preferred Sites			
1 Biodiversity	9	12		1
2 Water	2	11		9
3 Flooding	17			1 4
4 Sustainable use of land	10		6	6
5 Cultural Heritage	4	10		7 1
6 Landscape	4	2	11 5	
7 Air Quality	13			5 4
8 Energy	2	1	19	
9 Waste management	10		12	
10 Transport	1	13		8
11 Health & well-being	1	7		14
12 Nuisance and access	14			8

Sustainability Objectives (SO)	Cumulative Impacts of all Preferred Sites		
13 Economic growth	15	4	3

- As can be seen from the above there will be largely positive impacts from the allocated sites. Despite this, overall water quality (SO2) in the Plan Area could be seen to suffer from the allocations. It should be noted however that many of these impacts will be localised and that development principles, exist within the Plan for each site to ensure that such impacts are appropriately mitigated. In addition, Policy 10 of the Plan has integrated a stronger stance on the protection of water quality, in response to these highlighted impacts.
- A majority proportion of those impacts predicted for landscape quality (SO6) are either uncertain or negative, which translate as moderate to high impacts. The cumulative impact of landscapes in the Plan Area could be seen to deteriorate as a result of the allocations; however again, development principles exist to mitigate such impacts on a site-by-site basis.
- The Plan's allocated sites can be seen to have a large degree of negative impacts on health and well-being (SO11), associated largely with one or more sensitive receptors (properties) being in close proximity to sites and/or PROWs being on or adjacent to sites. Whilst the extent of these negative impacts appears significant, it should be acknowledged that a single property being within 250m of the allocation (regardless of facility type) qualified for a negative score and that such an impact would be capable of mitigation. It should also be acknowledged that, in line with the proximity principle, allocations in close proximity to key centres of growth are invariably more likely to encounter properties in their vicinity. Development principles exist for all the allocated sites, as specified in Appendix B of the Plan, and these contain a number of measures to protect local amenity. In addition, PROWs will have to be re-routed should they be disrupted and the Environment Agency addresses odour issues through the Pollution regime. As such, the negative impacts highlighted are unlikely to be forthcoming from any of the proposals.
- There will be a significant positive cumulative impact on employment opportunities from waste management (SO13) resulting from the allocated sites' proximity to key towns and centres for growth.

4.2.2 Cumulative Impacts of the Strategic Site Allocations by Broad Area

The allocated sites can be seen to accord well with three key elements of the Plan's Core Strategy; the Spatial Strategy itself, locating sites with regard to the proximity principle and in areas well connected to the strategic road network. Despite this, there may be cumulative localised issues emanating from the Plan's site allocations.

It should be noted that this section explores those impacts where clusters of sites exist, or where any other similarities between sites have been identified and discussed. The potential for cumulative impacts have been identified on the following clusters or groupings of sites as follows:

- L(n)8R, L(n)7R, and W32 (Uttlesford cluster 1)
- W7 and L(i)6 (Chelmsford cluster)
- L(n)5 and W29 (Colchester cluster)
- L(i)15, L(i)5 and W13 (Colchester / Tendring cluster)

- W3 and W20 (Basildon cluster)
- W8 and (Li)17R (Uttlesford cluster 2)

The potential for cumulative impacts on these clusters is explored in the following tables.

Table 6: Cumulative Impacts of sites L(n)8R, L(n)7R and W32

Site Ref.	Temp Effect	Sustainability Objectives (SO)												
		1	2	3	4	5	6	7	8	9	10	11	12	13
L(n)8R Little Bullocks	S / M	/	--	++	++	+	-	/	0	+	+	--	++	/
	L	/	--	++	/	0	/	0	0	0	0	/	0	0
L(n)7R Little Bullocks A22	S / M	/	--	--	++	/	/	/	0	+	+	--	++	+
	L	/	--	--	/	0	/	0	0	0	0	/	0	0
W32 Crumps Farm	S / M	/	-	--	-	/	-	/	0	+	+	/	++	+
	L	/	-	--	-	/	-	/	0	+	+	/	++	+

- The sites of L(n)8R, L(n)7R and W32 are all in close proximity to each other, and share a lot of impacts as a result. It can be seen that, in addition to there being significant negative impacts on water quality (SO2) as a result of each allocation individually, there may be further cumulative negative impacts on this objective. The Plan however, recognises the shared impacts of these sites, and although grouped and allocated for different facility types within the Plan, looks at them as a suite of allocations. Each site has different development principles in Appendix B of the Plan that are closely linked and relevant to each specific use, but there will be shared common benefits. The need for a hydrological assessment for site L(n)8R ensures that water quality issues are addressed in terms of hazardous landfill operations in the area. Inert recycling at site W32 will have a lesser impact on water quality and has been raised due to the proximity of a water body and can be mitigated through the requirements of Policy 10, which includes added emphasis on potential water quality issues. It is therefore viewed that the recommendation has been sufficiently factored into the Plan, where effective measures to mitigate the impacts on water quality in the area will be sought and adequately addressed.
- All of the sites will have uncertain impacts on biodiversity, due to their proximity to a LoWS. It is therefore possible that any impacts could magnify cumulatively. The SA at the Revised Preferred Approach (2015) stage indicated that a stance on mitigation would be required for the individual sites. The development principles for both landfill sites state that the LoWS would require protection for example through an appropriate buffer of at least 15m and that existing vegetation should be protected and retained. This seeks to alleviate the possible impacts resulting from these sites.
- Although the sites can be seen to have appropriate transport infrastructure individually, the SA at the Revised Preferred Approach (2015) stage highlighted the cumulative impact of these sites on the localised transport network, and that these would have to be explored in further detail due to their proximity to each other. The development principle for L(n)7R states that a vehicle routing agreement is required to ensure the site would be accessed via the existing access for Crumps Farm onto Stortford Road (B1256) to travel via the A120/M11 and that an internal haul road would be required between the site and the

Crumps Farm access. It is considered that this individual requirement would go some way to alleviate the cumulative impact that could arise from this cluster of allocated sites.

- No other significant negative cumulative impacts have been highlighted that can not be mitigated through each site individually. This includes those impacts associated with sensitive receptors within 250m of each site.

Table 7: Cumulative Impacts of sites W7 and L(i)6

Site Ref.	Temp Effect	Sustainability Objectives (SO)												
		1	2	3	4	5	6	7	8	9	10	11	12	13
W7 Sandon East	S / M	+	-	--	/	+	+	++	0	++	/	/	+	++
	L	+	-	--	/	+	+	++	0	++	/	/	+	++
L(i)6 Sandon	S / M	-	--	--	++	+	/	++	0	++	/	--	++	++
	L	/	--	--	/	0	/	0	0	0	0	/	0	0

- Regarding the cumulative impacts of the two sites at Sandon, it should be noted the area of L(i)6 includes the area of W7 and has been appraised as such in this SA. With that in mind, the appraisal of L(i)6 can be seen as reflective of the cumulative impacts of the two Sandon sites.
- The Sandon sites both have a range of negative impacts on water quality (SO2) and flooding (SO3). Despite this, there will be no further cumulative impacts, due to different water bodies being affected that are distinctly separate to specific areas of the site and as such unrelated to each other. The proportion of the site in FZ3 is very small in comparison to the total size of the site and the planning permission of the current operation on the site ensures that there will be no impacts resulting from the allocated uses.
- The SA at the Revised Preferred Approach (2015) stage stated that the cumulative impact of these sites on the localised transport network would also have to be explored in further detail due to their proximity to each other. It should be noted the development principles for the combined site states that improvements will be required to the A1114 (Essex Yeomanry Way) /Southend Road southbound off slip road and that a traffic management/priority control system to manage the single width private haul road in the vicinity of the site access, or alternative solution e.g. road widening/passing bays will be required. These development principles, outlining issues and opportunities to be addressed, sufficiently remove the possibility of cumulative negative impacts on transport where implemented.
- No other significant negative cumulative impacts have been highlighted that can not be mitigated through each site individually.

Table 8: Cumulative Impacts of sites L(n)5 and W29

Site Ref.	Temp Effect	Sustainability Objectives (SO)												
		1	2	3	4	5	6	7	8	9	10	11	12	13
L(n)5 Bellhouse	S / M	/	--	++	++	+	+	/	0	++	+	--	++	++
	L	/	--	++	/	0	/	0	0	0	0	/	0	0
W29 Bellhouse	S / M	/	-	++	++	/	-	/	/	+	+	--	++	++
	L	/	-	++	++	/	-	/	/	+	+	/	++	++

- Although considered a single site, the site contains two different operations, namely biological treatment and inert landfill, and these have therefore been assessed separately. Proposed activities on the Bellhouse allocation can be seen to have negative impacts on water quality (SO2) due to the proximity of water bodies to both portions of the site and biodiversity (SO1) due to the presence of nearby LoWSs. The two different operations on site could lead to cumulative impacts on both of these objectives. The development principles for the combined site identifies these issues as a single theme, and states that an appropriate buffer of at least 15m would be provided around CO5 8 Gol Grove and Hanging Wood Local Wildlife Sites and the Roman River. Any new scheme will need to be consistent with the approved restoration scheme for the existing landfill site. As such, it is considered that there would be no cumulative impacts associated with water quality (SO2) or biodiversity (SO1).
- In addition, both operations can be seen to have significantly negative impacts on health and well-being (SO11) due to sensitive receptors (properties) being located within 250m of the combined site area. Again, cumulative impacts are not expected to occur, through the existence of a combined site development principle that states that limits on duration (hours of operation) and noise standards (from noise sensitive properties including Bellhouse Farm) would be required in the interests of protecting local amenity. In addition, any potential odour issues will be addressed by the Environment Agency in the interests of protecting local amenity.

Table 9: Cumulative Impacts of sites W13, L(i)15 and L(i)5

Site Ref.	Temp Effect	Sustainability Objectives (SO)												
		1	2	3	4	5	6	7	8	9	10	11	12	13
W13 Wivenhoe Quarry	S / M	/	-	++	-	++	/	/	0	++	/	--	+	++
	L	/	-	++	-	++	/	/	0	++	/	/	+	++
L(i)15 Fingringhoe	S / M	/	--	++	/	+	++	++	0	++	++	--	++	++
	L	/	--	++	/	0	/	0	0	0	0	/	0	0
L(i)5 Sunnymead	S / M	/	--	++	++	/	++	/	0	+	/	--	+	++
	L	/	--	++	/	0	/	0	0	0	0	/	0	0

- The sites of W13, L(i)15 and L(i)5 have been grouped where they are located in a broadly similar location, and also in regard to their possible impacts on biodiversity through the international designation of the Colne Estuary as an SPA and Ramsar. In addition to development principles for these sites stating that likely significant effects on the nearby international wildlife sites need to be considered, it should additionally be noted that the Plan, as per the recommendation of the HRA, states that ‘planning permission for waste management development within or otherwise affecting an international site (Natura 2000 site) will only be granted where the conclusions of a project-level Habitats Regulations Assessment (HRA), as required for those proposals highlighted within the HRA of the Plan, demonstrate that the proposal will have no adverse impacts on the integrity of any site, either alone or in combination with other plans or projects.’ Screening distances are also provided as a guide for potential applicants in relation to the triggers for project-level HRA. The inclusion of this requirement in the Plan will effectively determine whether any impacts on internationally designated sites are likely. Additionally, project-level HRA will also identify the impacts of proposals in combination with other relevant projects, plans and programmes within the Plan Area. As such there will be no cumulative impacts on biodiversity.
- The sites also have individual negative impacts on water quality (SO2), associated with water bodies in or adjacent to the sites. The differences between negative impacts and significantly negative impacts in the case of these sites is related to the use; landfill warranting more significant impacts due solely to the nature of waste disposal. It is recommended that the mitigation of these water quality issues is included as a development principle for each site. Despite this, and although no development principles exist for any of these sites regarding water quality issues currently, the general theme of water quality has been given additional weight in Policy 10 of the Plan. As such, and in accordance with Policy 10, ‘proposals for waste management development will be permitted where it can be demonstrated that the development would not have an unacceptable impact (including cumulative impact in combination with other existing or permitted development) on...(b) The quality and quantity of water within water courses, groundwater and surface water.’ This effectively alleviates any concerns regarding the cumulative impacts of water quality regarding this cluster of sites.
- Any cumulative impacts associated with the individual significant negative impacts highlighted for health and well-being (SO11) on all of the sites, are effectively neutralised by each site’s development principles that require dust mitigation measures, limits on duration (hours of operation) and noise standards (from noise sensitive properties) in the interests of protecting local amenity.

Table 10: Cumulative Impacts of sites W3 and W20

Site Ref.	Temp Effect	Sustainability Objectives (SO)												
		1	2	3	4	5	6	7	8	9	10	11	12	13
W3 Basildon WWTW	S / M	/	-	/	/	+	/	++	0	++	+	-	++	++
	L	/	-	/	/	+	/	++	0	++	+	/	++	++
W20 Courtau- Id Road	S / M	/	-	++	/	++	/	++	0	++	+	-	+	++
	L	/	-	++	/	++	/	++	0	++	+	/	+	++

- As can be seen from the above comparative assessments of the sites W3 and W20 in

Basildon, there are a number of significant positive impacts associated with minimising environmental effects, and in the sustainable management of waste (SO9).

- The cumulative impact of these sites on the localised transport network (SO10) would have to be explored in further detail, due to the sites being located in very close proximity to another. This was an issue raised in the SA of the Revised Preferred Approach (2015). Since then, development principles for the sites have been included within the Plan to address specific issues and / or opportunities. With regard to site W3 Basildon WWTW, confirmation will be needed as to how internal access arrangements in relation to Courtauld Road in order to adequately alleviate any cumulative impacts.
- No other significant negative cumulative impacts have been highlighted that can not be mitigated through each site individually.
- Any cumulative impacts associated with the individual negative impacts highlighted for health and well-being (SO11) on the sites, are effectively neutralised by the fact that any potential odour issues will be addressed by the Environment Agency in the interests of protecting local amenity.

Table 11: Cumulative Impacts of sites W8 and L(i)17R

Site Ref.	Temp Effect	Sustainability Objectives (SO)												
		1	2	3	4	5	6	7	8	9	10	11	12	13
L(i)17R Newport Quarry	S / M	/	--	++	-	+	++	++	0	+	/	--	+	+
	L	/	--	++	/	0	/	0	0	0	0	/	0	0
W8 Elsenham	S / M	+	++	++	/	-	-	/	0	+	+	-	++	/
	L	+	++	++	/	-	-	/	0	+	+	/	++	/

- The sites of W8 and L(i)17R are unlikely to have many cumulative impacts, as can be seen above. It should be noted that, in the case of L(i)17R (Newport), the impacts highlighted for inert landfill have been explored for the purposes of this cumulative assessment.
- These sites have been explored as a cluster due to the uncertain transport impacts (SO10) associated with Newport and any subsequent implications this might have on the local road network which could affect the allocation at Elsenham. However, the development principles regarding Newport Quarry state that, 'a vehicle routing agreement is required to ensure the site is accessed via the existing access to Newport Quarry and via the Main Road network (and) consideration would need to be given at the planning application stage to the safe operation of the road bridge over the railway line west of the site access and the requirement for any additional traffic management.' With this in mind, no cumulative impacts have been identified for this objective.

5 Areas of Search & Locational Criteria

As well as the identification and allocation of Strategic scale facilities, the Plan is also required to provide additional flexibility and to cater for possible non-strategic waste requirements (arising locally). In order for the Plan to accommodate these requirements, 'Areas of Search' are proposed for designation. Further, to guide proposals for waste development coming forward on unallocated sites, a range of locational criteria have been included.

5.1 Areas of Search

The Plan states that Areas of Search are included to afford the Plan greater flexibility than a reliance on allocated sites only. Areas of Search comprise existing employment areas considered to be suitable, in principle, for a waste management use.

The Plan adds that it is recognised that Areas of Search offer less certainty than site allocations in terms of where waste development may occur in future. However, it is important that this Plan is able to respond flexibly to any potential change in demand from the waste industry. Such changes in demand could be linked to future changes in terms of the number of facilities required as well as changing circumstances influencing the suitability or viability of any direct site allocation – such as changes in site ownership. Areas of Search and locational criteria thereby expand the scope of potential sites that can be considered as being suitable for waste management, whilst still retaining a plan-led approach to support the delivery of waste management facilities in the Plan Area.

The WPAs consider that Areas of Search may be able to provide an alternative to site allocations, should some of these allocations become undeliverable in the future. Areas of Search also provide a policy steer for those waste management sites that serve a more local need to be located on existing employment areas over other, less sustainable locations. Proposals coming forward in an Area of Search will still be subject to a full planning application and assessed against the policies in the Waste Local Plan.

Areas of Search have been designated where, in principle, the Waste Planning Authorities may support waste management development outside of the allocated sites. The focus of the Areas of Search has been on employment land within industrial estates that have existing planning policy support for B2 (General Industry) and B8 (Storage or Distribution) uses under the Use Class Order.⁽⁵⁾ Under this Order, waste management facilities are considered sui generis ('in a class of its own') and therefore do not fit under a specific use class. It is, however, considered that employment land designated for B2 and B8 uses represent the most suitable land as many waste management operations are similar in nature and impact to industrial activities and storage and distribution facilities. Many of the Areas of Search are also near to the key centres for growth and so support the overarching Spatial Strategy. The Waste Planning Authority has a preference for waste management facilities to come forward in these locations over those which may be less suitable such as Greenfield sites or sites less well connected to main transport infrastructure or close to sensitive areas.

Unlike site allocations, Areas of Search have not been promoted by landowners for a particular waste management use, exact site boundaries are not defined, and they are not designated to manage a specific waste stream. The rationale behind this approach is to ensure that Areas of Search are able to respond flexibly to the market and as such, Areas of Search have been chosen using bespoke selection criteria found within the Plan's evidence base document, 'Areas of Search: Assessment and Methodology.' The methodology recognises that only a high-level 'in principle' assessment has been made of an Area of Search's suitability for waste development and proposals will be required to demonstrate conformity with the Development Plan by way of a full application. As such, the identification of Areas of Search as indicative of potentially suitable

locations for future waste management facilities, if required, will not conflict with the allocations and status of these areas within existing and emerging district level development plans.

5.1.1 Policy 4: Areas of Search

Proposals for waste management development in the following locations will be permitted.			
Preferred AoS	District	Preferred AoS	District
Burny Mills Central	Basildon	Westways	Chelmsford
Festival Business Park	Basildon	Widford Industrial Estate	Chelmsford
Pipps Hill	Basildon	Land off Axial Way, Myland	Colchester
Southfield Business Park	Basildon	Severalls Industry park	Colchester
Bluebridge Industrial Estate	Braintree	Tollgate, Stanway	Colchester
Earls Colne Airfield	Braintree	Whitehall Road Industrial Estate	Colchester
Eastways-Crittall Road, Waterside Park	Braintree	Langston Road / Oakland Hill, Loughton	Epping Forest
Freebournes Industrial Estate	Braintree	Pinnacles and Roydenbury Industrial Estate	Harlow
Skyline 120	Braintree	Temple Fields	Harlow
Springwood industrial Estate	Braintree	Rochford Business Park	Rochford
Sturmer Industrial Estate Area 1	Braintree	Michelins Farm	Rochford
Childerditch Industrial Estate	Brentwood	Stock Road	Southend-on-Sea
West Horndon	Brentwood	Temple Farm	Southend-on-Sea
Drovers Way	Chelmsford	Martell's Farm Industrial Area	Tendring
Dukes Park Industrial Estate	Chelmsford	Oakwood and Crusader Business Park	Tendring
Springfield Business Park	Chelmsford	Start Hill, Great Hallingbury	Uttlesford

The principle of economic development within the above areas has already been established at the District level and this is considered to include the potential for suitable waste management facilities given their sui generis classification, providing that any proposal is in accordance with the policies outlined elsewhere within this Plan. As such, the rigorous assessment of the sustainability of the above areas is not required within this Sustainability Appraisal.

The intention is for the Areas of Search to act as a guide for waste operators seeking to develop a site within the Plan Area. By virtue of showing a preference for proposals coming forward in employment areas, the Areas of Search act to help move waste up the Waste Hierarchy as it is a land use type which precludes landfill. For this reason the approach to Areas of Search has been selected. The SA of the Revised Preferred Approach RWLP (2015) explored whether the criteria used by the WPAs to identify suitable areas for potential future waste management facilities was a

sustainable approach, and explored reasonable alternative approaches to this methodology. Qualifying sites or areas have been selected in line with the criteria of the assessment methodology, which has been deemed the most sustainable approach in light of all reasonable alternatives explored at the revised Preferred Approach stage (2015).

These criteria are outlined below, followed by the assessment of the approach within the SA at that stage. The criteria were:

To designate Areas of Search around suitable B2 (General Industry) and / or B8 (Storage or Distribution) land as defined in the Local Plans of the districts, boroughs and City in the Plan area. Areas of Search are designated where, in principle, it is considered that waste management facilities could be bought forward. In the first instance, it is the intention that waste management facilities are delivered within those sites that have been directly allocated within the Plan. However, where it can be justified that a direct site allocation is not suitable, there is an expectation that the potential for facilities to be bought forward within Areas of Search is assessed prior to other locations being submitted.

Direct site allocations have been identified to accommodate the capacity requirements expected to arise within the Plan area over the lifetime of the Plan. Therefore, waste facilities proposed on Areas of Search will also be required to demonstrate that the proposal is required to manage waste based on the principle of net self-sufficiency in the Plan area.

Summary of Methodology (this summary responds to Stages 2-4 of the Employment Land Assessment report undertaken to identify suitable areas):

Stage 2 – Environmental and Social Sieving Criteria:

- The employment land area must be greater than 0.65ha
- Land must not be within 1km of a Natura 2000 site
- The sum of the area of land within the employment land area minus any area of the same land which is located within Flood Zone 3 must equate to 0.65ha or more.
- For all waste management facilities (except those generating bio-aerosols): The sum of the area of the land within the employment area minus the area of that land which is located within 100m of any sensitive receptor (i.e. residential property, school, or hospital) must equate to 0.65ha or more.
- For waste management facilities generating bio-aerosols or contaminants from thermal processes as for (A) except that the distance threshold is increased to 250m.
- Land within the employment land area must be able to be accessed by (at minimum) Heavy Goods Vehicle (HGV)
- Existing junction and access to employment land area must be safe and able to accommodate additional traffic movements as required by waste management facility.

Stage 3 - The following information was compiled for each employment land area as the output of this task:

- area description;
- surrounding uses and sensitivity;
- specific planning policy;
- opportunities and constraints;
- general comments and conclusions.

Stage 4 – further assessment and selection criteria

The final list of employment land areas were selected by identifying sufficient unconstrained land that in principle would be capable of being developed within each employment land area. This was achieved through:

- firstly mapping all individual plots (cadastral parcels) which make up each employment land area;
- secondly overlaying all constraints which impact the employment land area including the Stage 2 sieving criteria and any infrastructure impediments (roads, easements etc.) to identify remaining / residual unconstrained land within each plot;
- thirdly identifying the total area (ha) of the unconstrained land; and
- finally ruling out any of the long-listed employment land areas which had unconstrained plots of land (over 0.65ha) with a cumulative area of less than 3ha.

5.1.2 Significant Effects of the approach to identifying Areas of Search

	Sustainability Objectives (SO)												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Short Term	0	/	0	+	0	0	/	0	++	+	0	0	/
Medium Term	0	/	0	+	0	0	/	0	++	+	0	0	/
Long Term	0	/	0	+	0	0	/	0	++	+	0	0	/

There will be significant positive impacts on the sustainable management of waste (SO9) through the approach of designating Areas of Search around suitable B2 and / or B8 land as defined in the Local Plans of the districts, boroughs and City in the Plan Area. This allows flexibility within the Plan period in terms of providing sufficient facilities, but also in any instances where it can be justified that a direct site allocation is not suitable, through assessed maintenance of the Plan-led system prior to other, non-allocated locations being submitted. This therefore has a minor positive impact on the sustainable use of land (SO4). Minor positive impacts will also be realised for the transportation of waste (SO10) through the locations specified, and the access criteria against which potential sites have been assessed.

There will be no impacts on a large amount of the Sustainability Objectives in line with their initial assessment being undertaken through the Areas of Search criteria in the Areas of Search Methodology and Assessment document. Despite this however, uncertain impacts have been predicted for water quality (SO2) where the possibility of sites being located in close proximity to water bodies has not been taken into account. It is acknowledged however that any negative impacts in this regard are unlikely on B2 and / or B8 land uses, particularly in existing or allocated employment sites in district-level Local Plans. There will also be uncertain impacts on air quality (SO7) where criteria to protect such (e.g. factoring in the locations of, and impacts on, AQMAs) do not exist in the Areas of Search Methodology and Assessment document; however again it should be acknowledged that the report does not seek to allocate any new areas beyond those already existing or allocated in district-level Local Plans.

There will be uncertain impacts on economic growth and employment opportunities (SO13) where the possible eventual development of B2 or B8 land for waste management facilities is done so to the detriment of any alternative identified employment need in specific sectors and areas. To a lesser extent, although possible however, is that waste infrastructure supports other employment uses and could give rise to increased employment opportunities itself.

5.1.3 Temporal Effects of the approach to identifying Areas of Search

There will be no temporal effects resulting from this Policy.

5.1.4 Secondary, Cumulative and Synergistic Effects of the approach to identifying Areas of Search

There will be a cumulative strengthening of the Spatial Strategy’s notion of distribution throughout the Plan Area resulting from this Policy.

5.1.5 Alternatives Considered for the approach to identifying Areas of Search

It should be noted that any differences to the detailed content of the Area of Search criteria can not be deemed distinct enough to the Policy approach to be considered a reasonable alternative option for the purposes of assessing such in the SA. Any differences would not give rise to any different impacts on the sustainability objectives as highlighted above. Specific proposals within any Area of Search would have to adhere to other Policy content contained within the Plan including relevant locational criteria, in order to demonstrate their suitability.

Despite this, the following high level reasonable alternatives have been considered, along with their reason for rejection:

- Alternative 1: To not identify suitable B2 (General Industry) and / or B8 (Storage or Distribution) land for the consideration of waste management facilities.
- Alternative 2: To expand the area of search to employment areas beyond B2 and B8 use classes.
- Alternative 3: To safeguard portions / units of identified suitable areas.

	Sustainability Objectives (SO)												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Alternative 1	0	0	0	/	0	0	0	0	/	/	0	0	0
Reasons for rejection: The alternative would not respond to planning for flexibility within the Plan period. In addition, the approach may see applications for required facilities coming forward on land that does not respond to key centres of growth or in line with the Spatial Strategy. For these reasons this alternative was rejected.													
Alternative 2	0	/	0	/	0	0	/	0	++	/	0	0	/
Reasons for rejection: Under the Use Class Order, waste management facilities are considered sui generis ('in a class of its own') and therefore do not fit under a specific use class. It is, however, considered that of the Use Classes available, B2 and B8 represent the closest fit, as many waste processing activities are similar to the processes that take place on industrial estates. The alternative would likely see incompatibility between uses and there would likely be less interest from landowners of non-B2 / B8 uses to develop their land for waste management facilities. For this reason the alternative was rejected.													
Alternative 3	0	/	0	+	0	0	/	0	++	+	0	0	/
Reasons for rejection: This alternative could not be considered viable. The potential of a specific proposal coming forward from within any such area has not been demonstrated by interested landowners or developers due to the high-level nature of the Areas of Search exercise. As such the alternative was rejected.													

Alternative 1 will have uncertain impacts on the sustainable use of land (SO4), the sustainable management of waste (SO9) and sustainable transportation (SO10) where no guidance exists as to the preferred locations of any non-allocated waste management facilities that may be required to come forward in the Plan Area. The potential for negative impacts and unconformity with the

Spatial Strategy ensure this uncertainty.

Alternative 2 will have largely uncertain impacts on a number of sustainability objectives due to the potential incompatibility of waste management facilities being located in predominantly non-industrial areas. As the supporting text to the Revised Preferred Approach (2015) stated in regard to Areas of Search, 'waste management facilities are considered sui generis however of the Use Classes available, B2 and B8 represent the closest fit, as many waste processing activities are similar to the processes that take place on industrial estates.' This alternative approach would have significantly positive impacts on the sustainable management of waste however to the possible detriment of other Sustainability Objectives where the sieving and assessment criteria of the Employment Land Assessment report would be difficult to determine and implement and there would likely be incompatibility between uses.

Alternative 3 will have the same impacts as the selected methodology, with the added security of protecting suitable sites against other B2 or B8 uses. Despite this, the alternative is not viable as the potential of a specific proposal coming forward from within any such area has not been demonstrated by interested landowners or developers due to the high-level nature of the Areas of Search exercise.

5.1.6 Impacts on Indicators of the approach to identifying Areas of Search

The implementation of this Policy will impact on the following indicators:

- Tonnage recycled.
- Tonnage composted.
- Tonnage landfilled.
- Typical energy production (GwH) from Waste facilities.
- Typical amount of job creation (jobs per ha) within the waste industry.

5.1.7 Proposed Mitigation Measures / Recommendations for the approach to identifying Areas of Search

No mitigation measures have been recommended.

5.2 Locational Criteria for Waste Management Facilities

Locational criteria establish guiding principles for locating new waste development outside allocated sites or designated Areas of Search outlined in this Plan. As with the Areas of Search, locational criteria seek to provide greater flexibility to the waste industry to react to change and meet demand. They support the Plan-led approach to providing sustainable waste management opportunities to meet the identified future capacity needs in the Plan area.

As stated throughout the Plan, there is a strong preference for waste development to be delivered on site allocations and Areas of Search before alternative (unallocated) locations are considered, thereby helping achieve the Plan's Vision and Spatial Strategy. In contrast to allocated sites or Areas of Search, proposals for waste management development on unallocated or non-designated sites would need to evidence:

- That the proposal would deliver the capacity to provide for Essex and Southend-on-Sea's waste management needs;
- That the site allocations and Areas of Search are not appropriate sites for the delivery and operation of the proposed facility, and/or are unavailable.

In conjunction with Policy 10 'Development Management Criteria', the Locational Criteria seek to ensure that proposals on new, non-allocated, sites are as suitable for waste development as the

allocated sites identified in this Plan. A summary of the methodology used to select the allocated sites is included at Appendix D 'Summary of Site Identification and Assessment Methodology'

The Plan specifies a number of locational criteria for the following different waste facilities, which are appraised in turn within the remainder of this section:

- Enclosed waste facilities;
- Open waste facilities;
- Nuclear waste treatment and Storage at Bradwell-on-Sea;
- Non-Nuclear Very Low-Level and Low-Level Radioactive Waste; and
- Landfill facilities.

5.2.1 Policy 5: Enclosed Waste Facilities

Proposals for new enclosed waste management facilities will be permitted where:

1. The waste site allocations or the Areas of Search in this Plan are shown to be unsuitable and/or unavailable for the proposed development;
2. A need for the capacity of the proposed development has been demonstrated to manage waste arising from within the administrative areas of Essex and Southend-on-Sea; and
3. It is demonstrated that the site is at least as suitable for such development as Site Allocations or Areas of Search, with reference to the overall spatial strategy and site assessment methodology associated with this Plan.

In addition, proposals should be located at or in:

- a) Employment areas that are existing or allocated in a Local Plan for general industry (B2) and storage and distribution (B8); or
- b) Existing permitted waste management sites or co-located with other waste management development; or
- c) The same site or co-located in close proximity to where the waste arises; or
- d) The curtilages of Waste Water Treatment Works (in the case of biological waste); or,
- e) Areas of Previously Developed Land; or
- f) Redundant agricultural or forestry buildings and their curtilages (in the case of green waste and/or biological waste); or

Proposals for energy recovery facilities with combined heat and power are expected to demonstrate that the heat produced will be supplied to a district heat network or direct to commercial or industrial users.

Any proposals that come forward on land use types not identified above will be assessed on their merits, based on the policies in the adopted RWLP. Such locations will be considered less favourably than those set out within this Policy

5.2.2 Significant Effects

	Sustainability Objectives (SO)												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Short Term	0	0	0	++	0	0	/	++	++	++	0	+	+
Medium Term	0	0	0	++	0	0	/	++	++	++	0	+	+
Long Term	0	0	0	++	0	0	/	++	++	++	0	+	+

There will be significant positive impacts on the sustainable use of land (SO4) and transport (SO10) through co-location and a focus on previously developed land; energy (SO8) through a favourable stance on CHP proposals; and the sustainable management of waste (SO9) through a flexible approach that will assess proposals on their individual merits.

There will also be minor positive impacts on economic growth / job creation (SO13) through the majority of locational criteria focusing enclosed sites in current or traditional employment areas. Minor positive impacts will also be realised on public nuisance and access (SO12) through the utilisation of existing infrastructure and a general presumption against sites in previously undeveloped areas.

Uncertainty has been predicted regarding transport related air quality (SO7) due to many enclosed facilities being compatible with, and suitable within, existing industrial areas that may already experience large movements of vehicles.

The Policy differs slightly from the Revised Preferred Approach (2015) to enclosed waste facilities. The Revised Preferred Approach (2015) reiterated other elements of the Plan, which could be seen as over prescriptive and to the detriment of the Policy's purpose. As such, the Pre-Submission Policy approach specifies under what circumstances proposals outside allocations and Areas of Search would be favoured; those being predominantly regarding any changes to the availability and suitability status of allocated sites / those in Areas of Search, or where need for additional capacity can be demonstrated. In general this is a more flexible approach, and for that reason these discussed elements of the Revised Preferred Approach have been rejected for the Pre-Submission Policy stance.

5.2.3 Temporal Effects

There will be no temporal effects as a result of this Policy.

5.2.4 Secondary, Cumulative and Synergistic Effects

There will be secondary positive impacts on biodiversity (SO1), cultural heritage (SO5), landscape (SO6), and health and well-being (SO11) resulting from the majority of criteria responding to co-location, existing industrial sites, redundant farm buildings and brownfield land. The impacts on biodiversity and landscape will also be strengthened through the policy specifying that enclosed thermal facilities would need additional criteria and additional site assessment work to demonstrate that new facilities are more appropriate to those that are allocated.

5.2.5 Alternatives Considered

The following reasonable alternative was considered, along with its reason for rejection:

- Alternative 1: To have separate location criteria for the enclosed waste facilities of,

materials recycling / recovery and waste transfer stations (Alternative 1A); metal recycling and vehicle dismantling (Alternative 1B); in-vessel composting (Alternative 1C); clinical waste (Alternative 1D); MBT, autoclaving and AD (Alternative 1E); and inert waste recycling (1F).

	Sustainability Objectives (SO)												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Alternative 1A	0	0	0	++	0	0	/	0	++	+	0	/	+
Alternative 1B	+	0	0	++	0	+	/	0	++	+	0	+	+
Alternative 1C	0	0	0	++	0	0	/	0	++	+	0	+	+
Alternative 1D	0	0	0	++	0	0	/	0	+	++	0	/	+
Alternative 1E	0	0	0	++	0	0	/	++	++	+	0	+	+
Alternative 1F	0	0	0	++	0	0	++	0	++	++	0	/	+

Reasons for rejection: Although the alternative is not significantly different from the impacts predicted for the Pre-Submission policy approach, the single approach to enclosed waste facilities can be considered a more flexible approach. The alternative could be considered as more restrictive, limiting certain facilities to specific types of site and the preferred Policy approach instead seeks to direct them to broadly acceptable locations and determine them on their own merits. For these reasons the approach of separate locational criteria for specific facility types has been rejected, albeit with certain elements progressed to inform the Pre-Submission approach to the Policy.

Alternative 1 responds to the single approaches for specific enclosed facilities of the Preferred Approach WDD (2011). Together, elements of these 2011 Preferred Approaches have been merged into a single approach to enclosed waste facilities. The alternatives were appraised in the SA of the Preferred Approach WDD (2011) as having broadly positive impacts on the majority of the Sustainability Objectives. Incidents of uncertainty were predicted predominantly for air quality (SO7) and nuisance / access (SO12) due to many enclosed facilities being compatible with, and suitable within, existing industrial areas that may already experience large movements of vehicles. Despite this, for the same reasons were all of the alternatives singularly predicted as having positive impacts on the sustainable management of waste (SO9), transport (SO10), economic growth / employment opportunities (SO13) and the sustainable use of land (SO4). The approach to metal recycling and vehicle dismantling was predicted to have a small positive impact on biodiversity (SO1) and landscape character (SO6) where facilities are to be directed to locations that are unlikely to have wildlife, biodiversity or landscape value.

The above appraisals, when grouped, represent the general approach of separate locational criteria for enclosed facilities and can be seen to highlight a number of discrepancies. These include the various separate approaches' impacts on public nuisance / access and air quality. In addition to this it is also difficult to determine, and also assess, specific locational criteria for those facilities that could be suitable in a number of different types of location. Certain types of inert waste recycling facilities for instance, as covered in the previous 2011 Preferred Approach 8, could be compatible as an enclosed or open air facility. Similarly inert recycling facilities could be classified as enclosed or open air in theory, and dependant on the specific proposal would have differing locational criteria.

5.2.6 Impacts on Indicators

The implementation of this policy will impact on the following indicators:

- Tonnage recycled.
- Tonnage composted.
- Tonnage landfilled.
- Typical energy production (GwH) from Waste facilities.
- Typical amount of job creation (jobs per ha) within the waste industry.

5.2.7 Proposed Mitigation Measures / Recommendations

No mitigation measures have been recommended.

5.2.8 Policy 6: Open Waste Facilities

Proposals for new open waste management facilities will be permitted where:

1. The waste site allocations or the Areas of Search in this Plan are shown to be unsuitable and/or unavailable for the proposed development;
2. A need for the capacity of the proposed development has been demonstrated to manage waste arising from within the administrative areas of Essex and Southend-on-Sea; and
3. It is demonstrated that the site is at least as suitable for such development as Site Allocations or Areas of Search, with reference to the overall spatial strategy and site assessment methodology associated with this Plan.

In addition, proposals should be located at or in:

- a. Redundant farm land (in the case of green waste and/or biological waste); or
- b. Demolition and construction sites, where the inert waste materials are to be used on the construction project on that site; or
- c. Existing permitted waste management sites or co-located with other waste management development; or
- d. The curtilages of Waste Water Treatment Works (in the case of biological waste); or
- e. Mineral and landfill sites where waste material is used in conjunction with restoration, or proposed waste operations are temporary and linked to the completion of the mineral/landfill operation; or
- f. Areas of Previously Developed Land; or
- g. Employment areas that are existing or allocated in a Local Plan for general industry (B2) and storage and distribution (B8).

Any proposals that come forward on land use types not identified above will be assessed on their merits, based on the policies in the adopted RWLP. Such locations will be considered less favourably than those set out within this Policy.

5.2.9 Significant Effects

	Sustainability Objectives (SO)												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Short Term	0	0	0	++	0	0	/	0	++	++	0	+	+
Medium Term	0	0	0	++	0	0	/	0	++	++	0	+	+
Long Term	0	0	0	++	0	0	/	0	++	++	0	+	+

There will be significant positive impacts resulting from the Policy's approach to open waste

facilities on the sustainable use of land (SO4) and transport (SO10) through co-location and a focus on brownfield land; and the sustainable management of waste (SO9) through the assessment of sites on their individual merits in line with changing needs.

There will also be minor positive impacts on economic growth / job creation (SO13) through the majority of locational criteria focusing open sites in existing industrial areas. Minor positive impacts will also be realised on public nuisance and access (SO12) through the utilisation of existing infrastructure and a general presumption against sites in previously undeveloped areas.

Uncertainty has been predicted regarding transport related air quality (SO7) due to many facilities being compatible with, and suitable within, existing industrial areas that may already experience large movements of vehicles.

5.2.10 Temporal Effects

There will be no temporal effects as a result of this Policy.

5.2.11 Secondary, Cumulative and Synergistic Effects

There will be secondary positive impacts on biodiversity (SO1), cultural heritage (SO5), landscape (SO6), and health and well-being (SO11) resulting from the majority of criteria responding to co-location, existing industrial sites, redundant farm buildings and brownfield land.

5.2.12 Alternatives Considered

The following reasonable alternative was considered, along with its reason for rejection:

- Alternative 1: To have separate location criteria for the open (air) waste facilities of, outdoor composting (Alternative 1A); Waste Water Treatment Works (Alternative 1B); and inert waste recycling (Alternative 1C).

	Sustainability Objectives (SO)												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Alternative 1A	/	0	0	++	/	+	0	0	++	/	0	/	+
Alternative 1B	0	+	/	++	0	0	0	0	++	+	0	+	+
Alternative 1C	0	0	0	++	0	0	++	0	++	++	0	/	+

Reasons for rejection: Although the alternative is not significantly different from the Preferred Approach (2015) approach, the changes made can be considered a more flexible approach. The alternative could be considered as more restrictive, limiting certain facilities to specific types of site and the Preferred Approach (2015) instead seeks to direct them to broadly acceptable locations and on their own merits. For these reasons the approach has developed. Although the alternative is not significantly different from the impacts predicted for the Pre-Submission policy approach, the single approach to open waste facilities can be considered a more flexible approach. The alternative could be considered as more restrictive, limiting certain facilities to specific types of site and the preferred Policy approach instead seeks to direct them to broadly acceptable locations and determine them on their own merits. For these reasons the approach of separate locational criteria for specific facility types has been rejected, albeit with certain elements progressed to inform the Pre-Submission approach to the Policy.

Alternative 1 responds to the single Preferred Approaches for open (air) facilities of the Preferred Approach WDD (2011). Together, elements of these 2011 Preferred Approaches have been

merged into a single Preferred Approach for open (air) waste facilities. The alternatives were appraised in the SA of the Preferred Approach WDD (2011) as having significantly positive impacts on the sustainable use of land (SO4), and the sustainable management of waste (SO9) through directing facilities to degraded, contaminated or derelict land, previously developed land, and redundant farm land and buildings, or through co-location with other waste management development. All the Preferred Approaches were also assessed as having minor positive impacts on economic growth / job creation (SO13) for their merits in locating sites that respond to existing industrial estates.

The above appraisals, when grouped, represent the general approach of separate locational criteria for different types of open (air) facilities and can be seen to highlight a number of discrepancies. These include the various separate approaches' impacts on transport (SO10) and public nuisance / access (SO12) due to the different facilities managing very different types of waste. It should be noted that the Plan Area has enough existing waste water treatment capacity in the Plan period, and that such facilities are not included within the Plan.

The Plan's requirements of flexibility, the NPPF's presumption in favour of sustainable development, the criterion of assessing sites on their own merits, and the need for specific sites in regards to the evidence base ensure that a single Policy approach for all open (air) facilities is appropriate. It should be noted that, despite the above discrepancies, the broad impacts and requirements of open air facilities are similar in the context of the Plan. Criteria should be designed to minimise impacts and eliminate these in the first instance. For this reason different open air facilities share a lot in common, and a single Policy approach is considered appropriate in regards to the Plan's aims and objectives.

5.2.13 Impacts on Indicators

The implementation of this Policy will impact on the following indicators:

- Tonnage recycled.
- Tonnage composted.
- Tonnage landfilled.
- Typical energy production (GwH) from Waste facilities.
- Typical amount of job creation (jobs per ha) within the waste industry.

5.2.14 Proposed Mitigation Measures / Recommendations

No mitigation measures have been recommended.

5.3 Nuclear Waste Treatment and Storage at Bradwell-on-Sea

Bradwell-on-Sea Nuclear Power Station is a licensed Nuclear Site and is the principle source of radioactive waste arisings within the Plan Area whilst the Power Station is decommissioned.

The nuclear waste arisings from this process comprise Very Low Level (VLLW), Low Level (LLW) and Intermediate Level (ILW) Radioactive Wastes. A key element of the decommissioning is to manage the waste arising, to enable the waste to be safely retrieved from the facility, stored and processed whilst having regard to the level of radioactivity and long term options available.

The Bradwell-on-Sea site is the first site operated by Magnox within the Government's "Nuclear Decommissioning Authority (NDA)" to be decommissioned, and this is within an accelerated programme to deliver the "care and maintenance" stage in 2016/17. At this stage the site would be cleared and secured as appropriate, including the storage of ILW within a dedicated on-site long term ILW Storage facility (ILW store).

The Government is separately pursuing its strategy (Implementing Geological Disposal: A framework for the long-term management of higher activity radioactive waste, 2014) for a long term national Geological Disposal Facility (GDF) which is scheduled to be operational by 2040. It proposes a range of activities to be taken forward between 2014 and 2016 to set the framework for the GDF site selection process. The GDF is a "Nationally Significant Infrastructure Project" (NSIP) and the future siting is still to be determined. NSIPs are a national consideration and therefore outside of the remit of the RWLP.

It is noted that although the Plan cannot rule out any type of development, it was held in the Waste Local Plan 2001 that the geology of the Plan area does not support the disposal and containment of nuclear waste and that it was therefore likely that any such facility would be located beyond the Plan area. However, evidence contained in the Radioactive Waste Management Ltd consultation on 'National Geological Screening Guidance – Providing information on Geology' (September 2015) indicates that there is not a specific type of geology to accommodate a national GDF. This is due to the number of possible design solutions to accommodate different types of geology and the respective safety issues. The location of a GDF will be addressed through a public consultation, managed by Government, to determine an appropriate strategy. Any new GDF will receive the ILW waste that is currently stored at Bradwell-on-Sea.

The Government's National Policy Statement (NPS) for Nuclear Power Generation is considering the Bradwell-on-Sea site, alongside seven other sites nationally, for future nuclear energy development. If the Bradwell-on-Sea 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 ultimately depends upon the progress of the GDF and would need to be considered in the context of future national policy. Given the formative status of this process any potential waste arisings cannot be planned for at this stage. Such a new nuclear power station would be considered an NSIP and therefore outside of the remit of this Plan.

5.3.1 Policy 7: Nuclear Waste Treatment and Storage at Bradwell-on-Sea

Proposals for facilities for the treatment and/or storage of nuclear radioactive Intermediate Level Waste (ILW), Low Level Waste (LLW) or Very Low Level Waste (VLLW) will only be acceptable within the Nuclear Licensed Areas at Bradwell-on-Sea, where:

- The proposals are consistent with the national strategy for managing ILW, LLW and VLLW as well as the decommissioning plans for the Bradwell-on-Sea power station;
- The proposals are informed by the outcome of economic and environmental assessments that support and justify the management of decommissioned nuclear waste on-site, and;
- the proposals would not cause any unacceptable adverse impacts to the environment, human health or local amenity.

5.3.2 Significant Effects

	Sustainability Objectives (SO)												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Short Term	0	0	0	++	0	0	0	0	++	++	0	0	+
Medium Term	0	0	0	++	0	0	0	0	++	++	0	0	+
Long Term	0	0	0	++	0	0	0	0	++	++	0	0	+

It should be noted that the Policy has been retitled at this stage to offer more clarity on the situation at Bradwell Power Station, although it should additionally be noted that the content of the Policy has progressed throughout the plan-making process in line with the waste treatment requirements regarding the power station's decommissioning. As such the content of the Policy remains similar to that of the previous revised Preferred Approach (2015) stage and also that at the Preferred Approach (2011) stage. A separate Policy (Policy 8) has been created that specifically regards the small volumes of Low Level Radioactive Waste (LLW) and Very Low Level Radioactive Waste (VLLW) produced in the Plan Area, principally from hospitals and universities.

There will be significant positive impacts associated with the sustainable use of land (SO4) and the sustainable management of waste (SO9) through the criterion of storage only being acceptable within the Nuclear Licensed Areas at Bradwell. There will also be significant positive impacts regarding the sustainable transportation of waste (SO10) where VLLW, LLW and ILW would be received, stored and processed at source.

There will be a minor positive impact on economic growth (SO13) through the Policy considering Bradwell's selection as a Nationally Significant Infrastructure Project for future nuclear power generation.

5.3.3 Temporal Effects

There will be no temporal effects resulting from this Policy.

5.3.4 Secondary, Cumulative and Synergistic Effects

There will be secondary, or indirect positive impacts on biodiversity (SO1), water quality (SO2) and flooding (SO3) where the Policy seeks to minimise any adverse impacts on the environment. There will also be positive secondary impacts on health and well-being (SO11) and nuisance and access (SO12) through the approach to minimising the impacts on human health associated with minimising impacts. These impacts will be minimised in accordance with the same site assessment criteria and method used for selecting allocated sites within the Plan, as set out in the additional consultation documents surrounding the Site Assessment & Allocations Report.

5.3.5 Alternatives Considered

The following reasonable alternative was considered, along with its reason for rejection:

- Alternative 1: Permission for nuclear or radioactive waste (except low level clinical waste) will not be favoured and the Councils will seek to ensure that any nuclear wastes continue to be disposed of and/or reprocessed at appropriate national facilities (Issues and Options 2010)

	Sustainability Objectives (SO)												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Alternative 1	/	0	0	+	0	+	/	0	/	/	0	0	0
Reasons for rejection: Although not necessary to allocate new sites to deal with non-nuclear VLLW, the Plan must still set out the means by which new facilities would be assessed. The alternative can be considered an inflexible approach in line with the possibility that Bradwell is selected as a Nationally Significant Infrastructure Project for future nuclear power generation. For this reason, the alternative was rejected.													

At the Issues and Options (2010) stage, the SA stated that alternative 1 would have positive impacts on the sustainable use of land (SO4) and landscape (SO6) associated with no new facilities being sought or planned for in the Plan Area due to unsuitability. Uncertain impacts were also assessed for more site specific objectives. There would also be uncertain impacts on the sustainable management of waste (SO9) through the inflexibility of the alternative, which in turn would also have uncertain impacts on transport (SO10) in line with the proximity principle.

5.3.6 Impacts on Indicators

The implementation of this Policy will impact on the following indicators:

- Tonnage recycled.
- Tonnage composted.
- Tonnage landfilled.
- Typical amount of job creation (jobs per ha) within the waste industry.

5.3.7 Proposed Mitigation Measures / Recommendations

No mitigation measures have been recommended.

5.4 Non-Nuclear Very Low-Level and Low-Level Radioactive Waste

In addition to radioactive waste from the nuclear industry, small volumes of Low Level Radioactive Waste (LLW) and Very Low Level Radioactive Waste (VLLW) are produced in the Plan area, principally from hospitals and universities. As stated in the UK Strategy 2012, exempt low volume VLLW is currently disposed to landfills and incinerators used for handling other non-radioactive waste. No special provisions need to be addressed in environmental permits, and no extra provisions need to be made by the Waste Planning Authorities to allow this practice to continue.

In contrast to VLLW, most disposal of LLW requires a permit to be held by both the waste producer and the operator of the waste management facility that receives it. LLW can go to a landfill permitted by the Environment Agency to accept LLW for disposal, storage at the national Low Level Waste Repository (LLWR) near Drigg in Cumbria, or may be dealt with by incineration (with or without energy recovery). Only radioactive waste from the lower spectrum of LLW can be sent to permitted landfill. A Government commissioned report (Data collection on solid low-level waste from the non-nuclear sector DECC (2008)) stated that this stream is likely to reduce over the Plan period, and because there was sufficient capacity nationally to treat the non-nuclear LLW arising in Essex and Southend-on-Sea, there is no requirement to make further provision for non-nuclear radioactive waste facilities. However, in order for the Waste Local Plan to be able to respond to any changing circumstances, there is a requirement to set out a policy stance.

The ongoing availability of capacity for receipt of LLW and VLLW will also be monitored during the period of the Plan.

5.4.1 Policy 8: Non-Nuclear Very Low-Level and Low-Level Radioactive Waste

Proposals for the management of non-nuclear low-level and very low-level radioactive waste will be permitted where:

- a. A requirement to manage waste arising from within Essex and Southend-on-Sea has been identified; and
- b. The proposed development (including landfill) has been demonstrated to be the most appropriate and acceptable development in relation to the Waste Hierarchy; and
- c. The proposal would not cause any unacceptable adverse impacts to the environment, human health or local amenity.

5.4.2 Significant Effects

	Sustainability Objectives (SO)												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Short Term	0	0	0	++	0	0	0	0	++	0	0	0	+
Medium Term	0	0	0	++	0	0	0	0	++	0	0	0	+
Long Term	0	0	0	++	0	0	0	0	++	0	0	0	+

A Government commissioned report (Data collection on solid low-level waste from the non-nuclear sector DECC [2008]) stated that this waste stream is likely to reduce over the Plan period, and because there was sufficient capacity nationally to treat the non-nuclear LLW arising in Essex and Southend-on-Sea, there is no requirement to make further provision for non-nuclear radioactive

waste facilities. This has previously been the stance taken by the Plan throughout the plan-making process; however, in order for the Waste Local Plan to be able to respond to any changing circumstances, it has been considered that a requirement exists to set out a policy stance on non-nuclear LLW and VLLW. The Policy content has been established from the principles explored in various iterations dealing with nuclear ILW, VLLW and LLW and as such responds to similar themes and content that has been subject to consultation, most notably in the Issues and Options (2010) Plan, which explored the potential of existing non-hazardous landfill sites within the Plan Area for disposal of certain LLW and VLLW. For all of the above reasons the Policy, as it appears in the Plan, has been selected.

There will be significant positive impacts associated with the sustainable use of land (SO4) and the sustainable management of waste (SO9) through the requirements to identify a need to manage waste arising from within Essex and Southend-on-Sea in the first instance, alongside proposed developments (including landfill) demonstrating that they are the most appropriate and acceptable development in relation to the Waste Hierarchy.

There will be minor positive impacts on waste related employment opportunities (SO13) through the Policy’s flexibility in being positioned to respond to any proven need, where adequately demonstrated, for non-nuclear LLW and VLLW facilities within the Plan Area and in line with the Spatial Strategy.

5.4.3 Temporal Effects

There will be no temporal effects resulting from this Policy.

5.4.4 Secondary, Cumulative and Synergistic Effects

There will be secondary, or indirect positive impacts on biodiversity (SO1), water quality (SO2) and flooding (SO3) where the Policy seeks to minimise any adverse impacts on the environment. There will also be positive secondary impacts on health and well-being (SO11) and nuisance and access (SO12) through the approach to minimising the impacts on human health associated with minimising impacts.

5.4.5 Alternatives Considered

The following reasonable alternative was considered, along with the reason for rejection:

- Alternative 1a: Permission for nuclear or radioactive waste disposal (except low level clinical waste) will not be granted and the Councils will seek to ensure that any nuclear wastes continue to be disposed of and/or reprocessed at appropriate national facilities. (Issues and Options 2010)
- Alternative 1b: Assess the potential of existing non-hazardous landfill sites within the Plan Area for disposal of certain LLW and VLLW. (Issues and Options 2010)

	Sustainability Objectives (SO)												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Alternative 1a	/	0	0	+	0	+	/	0	/	/	0	0	0

Reasons for rejection: A Government commissioned report (Data collection on solid low-level waste from the non-nuclear sector DECC [2008]) stated that this waste stream is likely to reduce over the Plan period, and because there was sufficient capacity nationally to treat the non-nuclear LLW arising in Essex and Southend-on-Sea, there is no requirement to make further provision for

non-nuclear radioactive waste facilities. This has previously been the stance taken by the Plan throughout the plan-making process and was explored initially at the Issues and Options (2010) stage; however, in order for the Waste Local Plan to be able to respond to any changing circumstances, it has been considered that a requirement exists to set out a policy stance on non-nuclear LLW and VLLW. For this reason, the alternative has since been rejected.

	Sustainability Objectives (SO)												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Alternative 1b	/	0	0	+	0	+	/	0	/	/	0	0	0

Reasons for rejection: The alternative to assess the potential of existing non-hazardous landfill sites within the Plan Area for the disposal of certain LLW and VLLW has been rejected as a single method for the management of this waste, with a separate policy having been formulated to deal with locational criteria for landfill proposals. The approach to only consider the potential of existing non-hazardous landfill sites within the Plan Area for disposal of certain LLW and VLLW can be seen as inflexible in regards to the possibility of capacity being needed to manage this waste stream.

Alternative 1a – At the Issues and Options (2010) stage the SA highlighted that alternative 1a would have positive impacts on the sustainable use of land (SO4) and landscape (SO6) where no new facilities are sought in the Plan Area due to unsuitability. Uncertain impacts were also assessed for more site specific objectives. There would also be uncertain impacts on the sustainable management of waste (SO9) through the inflexibility of the alternative, which in turn would also have uncertain impacts on transport (SO10) in line with the proximity principle.

Alternative 1b - At the Issues and Options (2010) stage, the SA highlighted that alternative 1b would have positive impacts on the sustainable use of land (SO4) and landscape (SO6) where it can be demonstrated that existing capacity can be used at non-hazardous landfill sites for LLW and VLLW. Uncertain impacts were also assessed for more site specific objectives. There would also be uncertain impacts on the sustainable management of waste (SO9) through the inflexibility of the alternative, which in turn would also have uncertain impacts on transport (SO10) in line with the proximity principle.

5.4.6 Impacts on Indicators

The implementation of this Policy will impact on the following indicators:

- Tonnage recycled.
- Tonnage composted.
- Tonnage landfilled.
- Typical amount of job creation (jobs per ha) within the waste industry.

5.4.7 Proposed Mitigation Measures / Recommendations

No mitigation measures have been recommended.

5.5 Locational Criteria for Landfill

Extant guidance states that Waste Planning Authorities “*may wish to plan for a ‘close fit’ of land allocations with planned waste management capacity for landfill sites, given that landfill is at the bottom of the Waste Hierarchy*”. Proposals are required to demonstrate the capturing of landfill gas from a safety point of view and to ensure that the energy locked in waste is captured.

With regard to inert landfills specifically, these facilities are typically required both as a way of disposing of inert waste and as a means to ensure the satisfactory restoration of existing mineral voids. The inert landfill allocations have been identified on the basis of their suitability in terms of environmental impact and their restoration requirements.

There are three different types of landfill waste; however capacity for all types has not been identified as a requirement for the Local Plan. The situation is described more specifically for each type of waste, below:

- Inert Landfill – These are permitted and licensed to dispose of inert waste, which includes soils, clays, excavation materials, and inert construction and demolition wastes. Inert waste is described as biologically stable waste that does not undergo any significant physical, chemical or biological transformations. The existing landform post extraction can be restored back to original contours without the need for a doming of the infill as the characteristics of this waste means that it will not degrade and settle over time. The preferred locations for new inert landfill void space have been primarily identified by the allocations made within the Minerals Local Plan 2014. Preferred sites in the Minerals Local Plan 2014 were assessed for their ability to be restored at a low level so it is not the case that every site in the Minerals Local Plan will require restoration by way of inert landfill. Given changes in forecasted need for inert landfill capacity in the Plan area there will be opportunities for restoration predominantly led by inert landfilling at locations, which are, or will be, mineral extraction voids. Inert wastes are uneconomic to transport long distances and therefore it is appropriate to ensure sites are not concentrated within any one part of the Plan area.
- Hazardous Landfill - The Plan area currently relies on hazardous landfill facilities outside of the Plan Area for the disposal of reactive hazardous waste and this is expected to remain the case throughout the Plan period. As such, no locational criteria are proposed for hazardous landfill facilities.
- Non-Hazardous Landfill - The prioritisation of sites suitable for biological recovery means that no further non-hazardous landfill is necessary in the Plan area. The evidence supporting the Plan also indicates that there is sufficient capacity for non-hazardous landfill capacity in the Plan Area.

5.5.1 Policy 9: Waste Disposal Facilities

Proposals for landfill facilities will be permitted where:

1. The landfill site allocations in this Plan are shown to be unsuitable and/or unavailable for the proposed development.
2. A need for the capacity of the proposed development has been demonstrated to manage waste arising from within the administrative areas of Essex and Southend-on-Sea;
3. It is demonstrated that the site is at least as suitable for such development as the landfill site allocations, with reference to the site assessment methodology associated with this Plan; and
4. That the proposed landfill has been demonstrated to be the most appropriate and acceptable development in relation to the Waste Hierarchy.

In addition, proposals should be located in line with an:

- a. for the restoration of a preferred or reserve site in the Minerals Local Plan; or
- b. for an extension of time to complete the permitted restoration within the boundary of an existing landfill site.

Proposals for non-inert landfill are required to demonstrate the capture of landfill gas for energy generation by the most efficient means.

Any proposals that come forward on land use types not identified above will be assessed on their merits, based on the policies in the adopted RWLP. Such locations will be considered less favourably than those set out within this Policy.

5.5.2 Significant Effects

	Sustainability Objectives (SO)												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Short Term	+	0	0	++	0	++	0	++	++	+	+	0	0
Medium Term	+	0	0	++	0	++	0	++	++	+	+	0	0
Long Term	+	0	0	++	0	++	0	++	++	+	+	0	0

The Pre-Submission policy regarding landfill facilities has been amended from the Revised Preferred Approach (2015) stage in order to offer heightened flexibility. The Policy reflects a single approach to all landfill proposals (including hazardous landfill) relevant to the Plan Area, deviating from the Revised Preferred Approach (2015) approach of offering slightly different criteria for landfill proposals of different types of waste. It is not considered within this SA that the difference in approach would have any significantly different sustainability impacts. Policy 9 factors in the possibility that a landfill site allocation in the Plan could be proved to be unsuitable or unavailable, or comparably less so than any future proposal. This stance has been taken where the vast majority of District level growth targets are unknown at this stage, due to the respective progress of District level Local Plans in the Plan Area, and there being a subsequent requirements for waste

(of any type) to be managed as close to its source as possible. Aside from the heightened importance of flexibility within the Policy, the content and implications of the approach is and are not distinct enough to be considered an alternative approach to that presented as preferred in the Revised Preferred Approach (2015). For these reasons the Policy has been selected.

There will be significantly positive impacts on the sustainable management of waste (SO9) through the Policy’s criteria and flexibility to ensure that capacity exists over the Plan Period for the landfilling of waste. There will also be significantly positive impacts on the sustainable use of land / agricultural land (SO4), and landscapes (SO6) through the benefits of landfill of the appropriate materials for restoration purposes. Further significant positive impacts will be realised on energy (SO8) where applicants would have to demonstrate how proposals for non-inert landfill are required to demonstrate the capture of landfill gas for energy generation by the most efficient means.

There will be minor positive impacts on biodiversity (SO1), transport (SO10) and health and well-being (SO11) where any proposals that come forward on land use types not identified above will be assessed on their merits, based on the policies in the adopted RWLP.

5.5.3 Temporal Effects

There will be no temporal effects resulting from this Policy.

5.5.4 Secondary, Cumulative and Synergistic Effects

There will be significant positive impacts associated with the sustainable management of waste (SO9) and landscape (SO6) with this Policy’s stance in accumulation with the plan’s policy stance on Landraising (Policy 13).

5.5.5 Alternatives Considered

The following reasonable alternative was considered, along with their reason for rejection:

- Alternative 1: Location for landfill - void space within allocated mineral sites only - Issues and Options (2010) stage.
- Alternative 2: Location for landfill - within extensions to existing landfill facilities - Issues and Options (2010) stage.
- Alternative 3: To have separate locational criteria for the landfill requirements of, Inert landfill (Alternative 3A); non-hazardous landfill (Alternative 3B); and hazardous landfill (Alternative 3C) – WDD Preferred Approach (2011) stage.
- Alternative 4: To state different criteria for the landfill proposals of different types of waste - Revised Preferred Approach (2015)

	Sustainability Objectives (SO)												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Alternative 1	/	+	/	++	+	+	/	/	++	+	+	+	0
Reasons for rejection: It was considered that this approach would not be viable as it could conflict with the restoration proposals and requirements of minerals sites in the Adopted MLP. As such it was rejected for this purpose.													
Alternative 2	/	+	/	+	/	/	/	/	+	+	/	/	+
Reasons for rejection: This alternative would be dependent upon mineral extraction preceding													

landfilling. Extending a landfill that is not associated with mineral extraction would not be preferable to filling existing void spaces that require it for restoration. However, in reality most allocated inert landfill sites are extensions either to existing landfill or mineral sites (on the proviso that mineral extraction is feasible in the first instance) and so this approach is not as dissimilar to the Policy as it may seem. As a sole approach however it was rejected, with elements progressed to the preferred Policy approach and Site Assessment Criteria.

Alternative 3A	0	0	0	++	0	++	0	0	+	+	0	0	0
Alternative 3B	+	0	0	++	+	++	0	++	++	0	+	+	0
Alternative 3C	+	0	0	++	+	++	0	0	++	0	+	+	0

Reasons for rejection: It was considered limiting and inflexible to have separate criteria for non-allocated landfill sites. Proposals for a specific type of landfill may be compatible with extensions for existing landfill for another type. The approach could also be seen to be in conflict with elements of the spatial strategy and the proximity principle; where landfill capacity of a certain type may be required in more specific broad locations than this approach could deliver. For these reasons the alternative was rejected.

Alternative 4	+	0	0	++	0	++	0	++	++	+	+	0	0
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Reasons for rejection: The Revised Preferred Approach (2015) explored an amalgamated approach to landfill, incorporating elements of the 2011 Preferred Approach. Since consultation on the revised Preferred Approach (2015), the Policy has progressed from stating different criteria for landfill proposals of different types of waste. Despite this, the impacts highlighted in the SA of both the Revised Preferred Approach (2015) and Policy 9 are similar, and the implementation of each is not distinctly different. Despite this, the Revised Preferred Approach (2015) can be considered less flexible than that of Policy 9 in the Pre-Submission Plan and for that reason was rejected.

At the Issues and Options (2010) stage, all types of landfill sites were considered together and a range of options for landfill locations were put forward. Three broad locations were explored for their merits and the SA at this stage highlighted that there would be significant positive impacts on the sustainable management of waste (SO9) at void space within existing C&I landfill sites to accept MSW subject to environmental considerations, and also void space within mineral and landfill sites. Extensions to existing landfill can be expected to seek new land for landfill and thus are less positive. There will also be a significant positive impact at void space within mineral and landfill sites in regards to the sustainable use of land (SO4).

At the Preferred Approach WDD (2011) stage, it was considered appropriate to develop separate Preferred Approaches for hazardous and non-hazardous landfill, to reflect the fact that different types of landfill facilities will be appropriate in different locations. Alternative 3A was assessed at having significant positive impacts in the long term regarding agriculture (SO4) and landscape (SO6) in instances where infilling occurs to restore minerals allocations to agriculture and landscape levels post extraction. Alternative 3B was assessed as having significant positive impacts on sustainable waste management (SO9) in operation where the landfilling of waste that could practicably be recycled, composted or recovered will not be acceptable. There would also be significant positive impacts on energy generation (SO9) where landfill gas utilisation plants for energy recovery will be required at existing and new non-hazardous landfill sites. Additionally there would also be significant long term impacts on agricultural land (SO4) and landscapes (SO6) through restoration. Alternative 3C was assessed as having a significant positive impact on the sustainable use of land (SO4) 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 was also the case for

landscape character (SO6) in the long term. There would also be significant positive impacts on sustainable waste management (SO9) by pushing the management of hazardous waste up the waste hierarchy.

Alternative 4 represents the preferred approach at the Revised Preferred Approach (2015) stage. This explored an amalgamated approach to landfill, incorporating elements of the 2011 Preferred Approach. Since consultation on the revised Preferred Approach (2015), the Policy has progressed from stating different criteria for landfill proposals of different types of waste. Despite this, the impacts highlighted in the SA of both the Revised Preferred Approach (2015) and Policy 9 are similar, and the implementation of each is not distinctly different.

5.5.6 Impacts on Indicators

The implementation of this Policy will impact on the following indicators:

- Tonnage recycled.
- Tonnage composted.
- Tonnage landfilled.
- Typical energy production (GwH) from Waste facilities.
- Typical amount of job creation (jobs per ha) within the waste industry.

5.5.7 Proposed Mitigation Measures / Recommendations

No mitigation measures have been recommended.

6 Development Management Policies

The Plan highlights that waste developments can have a detrimental impact on their surroundings if they are not properly operated and monitored, and this must be carefully considered. It adds that the impacts on the quality of life of local residents, businesses and on the environment are key considerations when deciding where to locate new waste development. A wide range of potential adverse impacts can arise and the specific nature of these impacts and the ways of addressing them will vary case by case. The planning policy framework provided by this Plan has been formulated with flexibility and robustness in mind, to ensure that facilities can be brought forward in sustainable locations, either on those sites directly allocated or at other locations through criteria-based policies.

It should be noted here that a number of the potential impacts of waste facilities are addressed by the pollution control regime regulated by the Environment Agency. The regime is concerned with preventing pollution using measures to prohibit or limit the release of substances to the environment to the lowest practicable level, which is also not harmful to the environment. It also ensures that ambient air and water quality meet standards that guard against impacts to the environment and human health. The NPPW reinforces the stance 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.

Waste Planning Authorities are instructed to manage the development and use of land for waste management in the public interest, focus on whether waste development is an acceptable use of land and work on the assumption that the relevant pollution control regime will be properly applied and enforced. Waste planning and pollution control authorities therefore 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.

The Plan indicates that new waste management facilities to meet waste capacity requirements must be located in suitable locations and seek to avoid or mitigate adverse impacts that may arise. This has been set out through national and international waste policy and supported by the policies, general locational criteria and site allocations / Areas of Search made within this Plan.

The Plan goes on to add that it is therefore considered that only a limited range of policies are required in the RWLP to manage and control the effects of new waste management facilities within the Plan area. This is supported by national guidance, which is clear that Local Plans do not need to repeat or reformulate existing national, regional or local policy, or duplicate the existing pollution control regime.

6.1 General Considerations for Waste Management Proposals

Waste management development can result in a range of potential benefits and operational impacts that need to be considered. The planning policy framework provided by the Plan needs to be flexible enough to deal with a number of issues that may arise from different development, as well as take into account the local circumstances of each proposal. The supporting text for the Policy includes the Plan's stance on the following issues:

- Pollution and Local Amenity Impacts
- Biodiversity and Geological Conservation
- Countryside, Landscape, Townscape Character Impacts and Green Belt
- Recreation
- Heritage Assets

- Land and Soil Resources
- Potential Hazard to Aircraft from Bird Strike (for Open Air Facilities)
- The Transport Network
- Flooding, Water Resources and Water Quality
- Layout and Design Quality
- Cumulative Impacts.

In conjunction with the locational criteria policies in the Plan, Development Management considerations seek to ensure that any new, non-allocated, sites that come forward reflect the methodology and criteria used to select the preferred allocated sites in this Plan. This will help ensure that any new non-allocated sites perform at least as well as the allocated sites identified, whilst also offering a degree of flexibility.

6.1.1 Policy 10: Development Management Criteria

Proposals for waste management development will be permitted where it can be demonstrated that the development would not have an unacceptable impact (including cumulative impact in combination with other existing or permitted development) on:

- a. Local amenity (including noise levels, odour, air quality, dust, litter, light pollution and vibration);
- b. The quality and quantity of water within water courses, groundwater and surface water;
- c. The capacity of existing drainage systems;
- d. The best and most versatile agricultural land;
- e. Farming, horticulture and forestry;
- f. Aircraft safety due to the risk of bird strike and/or building height and position;
- g. The safety and capacity of the road and other transport networks;
- h. The appearance, quality and character of the landscape, countryside and visual environment and any local features that contribute to its local distinctiveness;
- i. The openness and purpose of the Metropolitan Green Belt;
- j. Public Open Space, the definitive Public Rights of Way network and outdoor recreation facilities;
- k. Land stability;
- l. The natural and geological environment (including internationally, nationally or locally designated sites and irreplaceable habitats);
- m. The historic environment including heritage and archaeological assets and their settings; and
- n. The character and quality of the area, in which the development is situated, through poor design.

6.1.2 Significant Effects

	Sustainability Objectives (SO)												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Short Term	++	++	+	+	++	++	+	0	0	++	++	++	0
Medium Term	++	++	+	+	++	++	+	0	0	++	++	++	0
Long Term	++	++	+	+	++	++	+	0	0	++	++	++	0

Significant positive impacts will be realised for the historic environment (SO5) where waste management development proposals will only be acceptable where it can be demonstrated that the development would not have an unacceptable impact on the historic environment including heritage and archaeological assets and their settings. Further significant positive impacts will be realised regarding landscape character (SO6) regarding the appearance, quality and character of the landscape, countryside and visual environment and any local features that contribute to its local distinctiveness.

There will be significant positive impacts on health and well-being (SO11) through the Policy's stance on Public Open Space, the definitive Public Rights of Way network and outdoor recreation facilities. Further significant impacts will be realised for public nuisance and access (SO12) through avoiding unacceptable impacts on local amenity (including noise levels, odour, air quality, dust, litter, light pollution and vibration).

There will also be significant positive impacts on water quality (SO2) through the Policy's approach to avoiding unacceptable impacts on the quality and quantity of water within water courses, groundwater and surface water. Similarly there will be significant positive impacts on transport (SO10) through the Policy's stance on the safety and capacity of the road and other transport networks.

It was stated in the SA of the Revised Preferred Approach (2015) that there will be positive impacts on biodiversity (SO1) but despite this, negative impacts of proposals could be experienced on Natura 2000 sites within certain distances. It added that the Habitats Regulations Assessment (HRA) stressed that the flexible approach of the Plan could result in negative impacts on Natura 2000 sites, particularly in accumulation with other developments, plans and programmes within the Plan Area over the plan period. The Pre-Submission Policy has factored in this recommendation, and also the recommendation of the HRA in including a requirement that proposals for waste management facilities will have to demonstrate that they would not have an unacceptable impact on internationally, nationally or locally designated sites. The supporting text, in elaborating on what would be required to demonstrate this, includes the possible need for project-level HRA to accompany certain schemes in certain locations. The Policy, as a result, will now have significant positive impact on biodiversity (SO1).

There will be minor positive impacts on flooding (SO3) through the Policy's stance on the capacity of existing drainage systems. There will also be minor positive impacts on the sustainable use of land, soils and agricultural land (SO4) where waste management development proposals will only be acceptable where they avoid unacceptable impacts on agricultural land, in particular loss of Grades 1, 2 or 3a agricultural land.

It was also stated in the SA of the Revised Preferred Approach (2015) that there will be an uncertain impact on air quality (SO7) where air quality issues were not directly covered. The policy has since been amended to include air quality, resulting in a minor positive impact.

6.1.3 Temporal Effects

There will be no temporal effects resulting from this Policy.

6.1.4 Secondary, Cumulative and Synergistic Effects

There will be no secondary, cumulative or synergist effects resulting from this Policy.

6.1.5 Alternatives Considered

The SA of the Preferred Approach WDD (2011) stated that, ‘At the Issues and Options stage, the different development management issues were considered separately. For each issue, a range of policy criteria were proposed and consultees were asked to comment on them, rather than setting out distinct options to be chosen or rejected.’ The following reasonable alternative was thus considered, along its reason for rejection:

- Alternative 1: To have separate policies on the following development management issues – Health Impact Assessments, landscape and townscape, and biodiversity.

In addition to this, and although the range of criteria stated in the Policy is similar to the previous Revised Preferred Approach (2015) approach to development management criteria, the content at that stage can be seen as distinctly different so as to warrant it’s consideration and status as a reasonable alternative.

- Alternative 2: To adopt the Revised Preferred Approach (2015) criteria and policy content

	Sustainability Objectives (SO)												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Alternative 1	++	+	+	+	/	++	+	/	/	/	++	+	/
Reasons for rejection: Analysis of the consultation responses, the Annual Monitoring Report, Waste Local Plan policies, and input from Development Management officers indicated that rationalising policy into a single preferred approach dealing with DM issues would be most appropriate. The criteria put forward were selected with the aim of addressing all of the key issues without unnecessary repetition. Thus this alternative of multiple single policy issues was rejected.													
	Sustainability Objectives (SO)												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Alternative 2													
Reasons for rejection: The range of criteria stated in the Policy is similar to the Previous Revised Preferred Approach (2016) approach to development management criteria. Despite this, the Pre-Submission Policy elaborates on certain issues and criteria, predominantly in the supporting text, offering a stronger and more sustainable stance on issues such as transport networks, air quality and water quality. Notably the Policy also has an increased focus on protecting internationally, nationally and locally designated wildlife sites, with an notable inclusion that proposals may be required to be accompanied with a project-level HRA in certain instances and within specific distances, which was lacking and a criticism of the Revised Preferred Approach (2015) approach. As such, the Policy approach has been selected in favour of the approach espoused in the Revised Preferred Approach (2015), which has since been rejected.													

Alternative 1 - The SA of the Issues and Options WDD (2010) stage highlighted significant positive impacts on biodiversity (SO1) through seeking the potential for the enhancement and protection of

biodiversity and also the specific mitigation to sites, habitats and species where impacts are unavoidable. There were also significant positive impacts on landscape (SO6) through minimising the impacts from facilities. Lastly, significant positive impacts were also predicted for health (SO12) where the approach considered that Health Impact Assessments be explored on a case-by-case basis where there would be the potential for significant effects on health. Minor positive impacts were assessed as being predominantly indirect or secondary, in response to a separate policy on biodiversity. Uncertainty surrounded cultural heritage (SO5), energy (SO8), the sustainable management of waste (SO9), transportation (SO10) and economic growth (SO13) through a lack of specific policy on, or direct criteria relevant to, these factors.

Alternative 2 – the SA at the Revised Preferred Approach (2015) stage highlighted significant positive impacts for the historic environment (SO5), landscape character (SO6), health and well-being (SO11) and public nuisance and access (SO12). Economic opportunities (SO13) were also predicted to experience significantly positive impacts. In addition, minor positive impacts would be realised on the sustainable use of land, soils and agricultural land (SO4) and biodiversity (SO1). Despite this, the approach did not factor in any negative impacts of proposals that could have been experienced on Natura 2000 sites within certain distances. Uncertain impacts on air quality (SO7) were also highlighted where air quality issues were not directly covered.

6.1.6 Impacts on Indicators

The implementation of this Policy will impact on the following indicators:

- Tonnage recycled.
- Tonnage composted.
- Tonnage landfilled.
- Typical energy production (GwH) from Waste facilities.

6.1.7 Proposed Mitigation Measures / Recommendations

The SA of the Revised Preferred Approach (2015) recommended that, ‘the supporting text highlights the range of sites with international designation in the Plan Area, and recognises the fact that the impacts of development on biodiversity should be fully understood; however it is recommended that this Policy, or the supporting text, be expanded to reflect the possibility of impacts on Natura 2000 sites in line with the findings of the HRA. The policy could be more specific as to the possible requirements of the developer to, in accompaniment to any planning application, undertake project-level HRA or Appropriate Assessment to ascertain the implications of development on such designations and in accumulation with other developments, plans and programmes in the Plan Area.’ The WPAs, through Policy 10, have factored in this recommendation, and the approach has been amended accordingly. The policy now includes that proposals for waste management facilities will have to demonstrate that they would not have an unacceptable impact on internationally, nationally or locally designated sites and the supporting text, in elaborating on what would be required to demonstrate this, includes the possible need for project-level HRA to accompany certain schemes in certain locations.

6.2 Mitigating and Adapting to Climate Change

There is a need to reduce the contribution to climate change from waste management activities, while also adapting to its potential effects. The Plan area is one of the driest areas in the country and there is a need to minimise demands on potable water resources, particularly in the context of climate change. Large parts of the Plan area are at risk from flooding, particularly coastal and river localities, and particularly from surface water run-off after storm events; again an issue that will be

compounded by climate change.

6.2.1 Policy 11: Mitigating and Adapting to Climate Change

Proposals for waste management development, through their construction and operation, are required to minimise their potential contribution to climate change by reducing greenhouse gas emissions, incorporating energy and water efficient design measures and being adaptable to future climatic conditions.

1. Proposals for new waste management development will:

- a. demonstrate how the location, design (including associated buildings) and transportation related to the development will limit greenhouse gas emissions;
- b. support opportunities for decentralised and renewable or low-carbon energy supply, subject to compliance with other policies in the Development Framework;
- c. demonstrate the use of sustainable drainage systems, water harvesting from impermeable surfaces and layouts that accommodate waste water recycling; and
- d. incorporate proposals for sustainable travel including travel plans where appropriate.

2. Proposals for waste management development will only be permitted where:

- a. 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, as demonstrated by a Flood Risk Assessment, where required by the National Planning Policy Framework;
- b. 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;
- c. there would not be an unacceptable risk to the quantity and quality of surface and ground waters, or impediment to groundwater flow.

3. Proposals which are capable of directly producing energy or a fuel from waste should, where reasonably practicable, demonstrate that:

- a. excess heat can be supplied locally to a district heat network or directed to commercial or industrial users of heat;
- b. for anaerobic digestion proposals there is an ability to inject refined gas produced as part of the process into the gas pipeline network or to be stored for use as a fuel;
- c. for advanced thermal treatment there is an ability to convert syngas for use as a fuel;
- d. for Mechanical Heat Treatment or Mechanical Biological Treatment, development can supply the heat produced as part of the process to a district heating scheme;
- e. for non-hazardous landfill, the landfill gas is captured for the recovery of energy by the most efficient methods and consideration has been given to the ability to connect to a district heat network or for converting recovered gas for injection to the gas pipeline network;

f. where the provision of e. (above) is not feasible or technically practicable, the development shall not preclude the future implementation of such systems.

6.2.2 Significant Effects

	Sustainability Objectives (SO)												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Short Term	0	++	++	0	/	/	++	++	+	++	+	0	0
Medium Term	0	++	++	0	/	/	++	++	+	++	+	0	0
Long Term	0	++	++	0	/	/	++	++	+	++	+	0	0

It should be noted that a number of the potential impacts of waste facilities are addressed by the pollution control regime regulated by the Environment Agency and these have been factored into this appraisal. Waste Planning Authorities are instructed to work on the assumption that the relevant pollution control regime will be properly applied and enforced. The NPPW reinforced the stance 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. The NPPW states that the planning and pollution control regimes are separate but complementary, and a facility will not be permitted by the Waste Planning Authority, nor be allowed to continue to operate, if it does not conform to the pollution control regime. Pollution control is implemented through the environmental permitting regime, which is regulated by the Environment Agency. It is concerned with preventing pollution using measures to prohibit or limit the release of substances to the environment to the lowest practicable level, which is also not harmful to the environment. It also ensures that ambient air and water quality meet standards that guard against impacts to the environment and human health.

There will be significant positive impacts on water quality (SO2) where proposals for new waste management facilities should incorporate water efficient design measures. Similarly, proposals will not be permitted where they fail to demonstrate that there would not be an unacceptable risk to the quantity and quality of surface water and groundwaters, or impediment to groundwater flow. As well as aiming to ensure that emissions are reduced, there will be significant positive impacts on flood risk (SO3) where proposals will only be permitted where there would not be an unacceptable risk of flooding on site or elsewhere and where existing and proposed flood defences are protected. Proposals should also set out their use of sustainable drainage systems where applicable.

There will be significant positive impacts resulting from this Policy on air quality (SO7) through a commitment to reduce carbon emissions directly from waste management facilities in construction and operation, as well as regarding associated transport movements. This also applies for renewable energy generation (SO8) through proposals being required to set out how they support opportunities for decentralised and renewable or low-carbon energy supply, a requirement to minimise carbon emissions through energy efficient design measures and the requirements included within section 3 of the policy for all those proposals capable of producing energy or a fuel from waste. Section 3 of the policy is a new inclusion at this stage of the Plan and is viewed as clearly setting out the requirements of proposals for the purpose of maximising energy production from waste activities and exploring it in all relevant proposals. This is viewed as a more sustainable approach than previous iterations of this Policy. There will also be significant positive impacts on transport (SO10) where proposals for new waste facilities should set out how the location and

transportation related to the development will limit carbon emissions, as well as incorporating proposals for sustainable travel including travel plans where appropriate.

There will be minor positive impacts on the sustainable management of waste (SO9) through increasing the energy efficiency of waste management facilities that are adaptable to future climatic conditions, and the recovery of energy in relevant instances. The Policy is unlikely to impact on moving waste management up the waste hierarchy in the Plan Area, thus positive impacts are limited. There will be positive impacts on health (SO11) in so far as a reduction in carbon emissions from waste management facilities will minimise any related air quality issues. This has impacts on human health; however the policy is not relevant to the rest of this objective's criteria.

Uncertain impacts are predicted on the historic environment (SO5) and landscape character (SO6) where design measures specific to energy and water efficiency may not be compatible with nearby historical assets or local landscape features, and the implementation may be difficult in certain circumstances. Despite this, negative impacts are unlikely to occur as a result of the wider strategy and are effectively neutralised by the criteria of Policy 10.

6.2.3 Temporal Effects

There will be no temporal effects resulting from this Policy.

6.2.4 Secondary, Cumulative and Synergistic Effects

There will be secondary positive impacts on biodiversity (SO1) through a reduction in carbon emissions and the impacts on water bodies (SO2) and reduced flood risk (SO3) which can impact negatively on species and habitats. Similarly, there will be a secondary positive impact on public nuisance and access (SO12) through a reduction in emissions that could affect local and neighbouring developments were this Policy not implemented. Similarly, the indirect impacts on neighbouring uses in regards to flood risk and access arrangements should also be positive through detailed criteria to minimise flooding and travel plans where appropriate.

6.2.5 Alternatives Considered

National Planning Policy requires that measures to mitigate and adapt to climate change are incorporated into new development proposals, including waste. ECC corporate policies and strategies aspire to deliver a Zero-Waste economy, to value waste arisings as a resource, and managing waste in a cost effective way, minimising the impact on the environment.

The ECC and SBC (2015) Non-Technical Capacity Summary supports waste management in line with the waste hierarchy. It identifies a need for future capacity requirements based on the principles of national planning policy and local ambitions/evidence.

The SA of the previous Preferred Approach WDD (2011) stated that, 'At the Issues and Options stage, suggested policy criteria were proposed in relation to mitigating and adapting to climate change, rather than distinct alternatives being suggested. Suggestions for alternative approaches were requested where respondents did not agree fully with the suggested policy approach and the majority were in broad agreement with the suggested policy approach. As such this is reflected in the Policy.' The SA/SEA of the Issues and Options WDD stated that there would be 'major positive impacts on climate change (SEA Objective 8) through efficient use of energy and the recovery and utilisation of energy from waste where appropriate and feasible.' There would also be 'major positive impacts on sustainable management of waste (SEA Objective 9) where proposals demonstrate the need for the type of waste management process in relation to the waste hierarchy

and the waste management capacity gap in the Plan Area. In addition there would be ‘indirect positive impacts on SEA Objectives 1 (biodiversity) and 2 (water quality) through avoiding increased pressure on natural resources’ and ‘positive impacts on SEA Objective 3 (flood risk) through avoiding areas at risk of flooding.’ There would also be ‘positive impacts on SEA Objectives 7 (air quality) and 10 (transport) where facilities are consistent with transport policies of the WDD by reducing total transport distances and seeking the most sustainable modes of transport possible.’

The findings of the three previous Sustainability Appraisals at the Issues and Options (2010) and Preferred Approach WDD (2011) stages have contributed to the Policy. The Revised Preferred Approach (2015) iteration of the Policy did not include criteria for those proposals capable of producing energy or a fuel from waste and this addition (as espoused in Section 3 of the Policy) is considered a more sustainable approach than previous iterations of this Policy.

For all the above reasons, there have been no distinctively alternative approaches developed for mitigating and adapting to climate change. It is considered that no possible alternative approaches could be deemed reasonable for the purposes of the SA. Any alternative approaches would not reflect national policy requirements of WPAs in formulating a Waste Local Plan or the evidence base of the Plan itself.

6.2.6 Impacts on Indicators

The implementation of this Policy will impact on the following indicators:

- Tonnage recycled.
- Tonnage composted.
- Tonnage landfilled.
- Typical energy production (GwH) from Waste facilities.
- Typical amount of job creation (jobs per ha) within the waste industry.

6.2.7 Proposed Mitigation Measures / Recommendations

No mitigation measures have been recommended.

6.3 Transportation of Waste

The transportation of waste within the Plan Area should be as sustainable as practicable. The Plan highlights that the impact of transporting materials to and from waste sites is one of the most important concerns to communities and that every effort should be made to reduce the quantity of waste materials that have to be transported whilst minimising the distance over which they must be transported.

This means locating waste management facilities close to the source of the waste. This approach is in accordance with the ‘Proximity Principle’, a concept derived from EU legislation, which requires waste to be treated as close to the point of its arising as practicable.

The Plan adds that opportunities to transport waste by more sustainable modes, such as rail and water, are encouraged wherever possible, although such opportunities in the Plan Area are rare due to a lack of suitable infrastructure. It is therefore recognised that waste will continue to primarily be transported by road, as this is currently the most feasible mode of transport. The possibility of using rail and water for the transportation of materials to and from the site should however not be discounted. The use of such means of transportation should be investigated in terms of both practicality and viability before transportation by road is considered.

6.3.1 Policy 12: Transport and Access

Proposals for waste management development will be permitted where it is demonstrated that the development would not have an unacceptable impact on the efficiency and effective operation of the road network, including safety and capacity, local amenity and the environment.

Proposals for the transportation of waste by rail and/or water will be encouraged subject to other policies in this Plan. Where transportation by road is proposed, this will be permitted where the road network is suitable for use by Heavy Goods Vehicles or can be improved to accommodate such vehicles.

The following hierarchy of preference for transportation will be applied:

- a. The transport of waste by rail or water;
- b. Where it is demonstrated that (a) above is not feasible or practicable, access will be required to a suitable existing junction with the main road network (not including secondary distributor roads, estate roads and other routes that provide local access), via a suitable section of existing road, as short as possible, without causing a detrimental impact upon the safety and efficiency of the network; or
- c. Where it is demonstrated (b) above is not feasible, direct access to the main road network involving the construction of a new access and/or junction where there is no suitable existing access point and/or junction.

6.3.2 Significant Effects

	Sustainability Objectives (SO)												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Short Term	0	0	0	0	0	0	+	0	0	++	0	+	0
Medium Term	0	0	0	0	0	0	+	0	0	++	0	+	0
Long Term	0	0	0	0	0	0	+	0	0	++	0	+	0

There will be significant positive impacts on transport (SO10) through seeking opportunities for the transportation of waste by rail or water in the first instance. It should be acknowledged that the use of rail or water in transporting waste may result in an increase in the distance waste travels, due to the nature of the required infrastructure, however these are more sustainable options in terms of both emissions and congestion. This increase in waste miles via rail or wharf transshipment facilities may result in more cross boundary movements, however the approach strikes a good balance between increasing sustainable transportation within the realms of what is practicable in terms of cost and impacts on the road infrastructure. The Policy accepts that road infrastructure is still likely to be utilised predominantly for the transportation of waste in the Plan Area, and addresses this with a hierarchical approach to access arrangements so as not to significantly impact on local roads and the general population. The Policy is therefore a viable and realistic approach.

Additionally there will be a minor positive impact on minimising public nuisance / access (SO12) through an approach to waste transportation that seeks to, in part, minimise situations where HGVs will directly impact on local residential amenity. There will also be positive impacts on air quality (SO7) through seeking opportunities for the transportation of waste by rail or water in the

first instance. It is felt that a large number of the Sustainability Objectives are better covered in other Policies regarding the locational criteria of facilities and the development management criteria stated in Policy 10.

6.3.3 Temporal Effects

There will be no temporal effects resulting from this Policy.

6.3.4 Secondary, Cumulative and Synergistic Effects

There will be no secondary, cumulative or synergistic effects resulting from this Policy.

6.3.5 Alternatives Considered

The following reasonable alternative was considered, along with its reason for rejection:

- Alternative 1: An approach of seeking to reduce transport distances by taking account of where the majority of waste arises and the destination of recycled, treated and recovered outputs and residual waste for disposal (with an additional focus on regional interchange centres and inter-urban/intra-urban routes with existing capacity as defined by the main highway network) – Issues and Options WDD (2010)

	Sustainability Objectives (SO)												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Alternative 1	+	0	0	0	+	+	+	0	0	++	+	+	/

Reasons for rejection: The alternative was considered too broadly focused on the location of facilities in line with the proximity principle. This approach would result in very few facilities being appropriate or available in line with the spatial strategy and the capacity gap requirements of the Plan. For these reasons, the alternative was rejected in favour of an approach that additionally factors in the suitability of access into and out of any site and the nature of the roads that the vehicles use in line with local Route Hierarchy Plans relevant to the Plan Area.

Within the SA of the Issues and Options WDD (2010) alternative 1 was assessed as having major positive impacts on SO10 through seeking opportunities to transport waste by rail or water in the first instance. The resulting minor positive impacts were highlighted as being secondary or indirect. These reflected the effects on biodiversity (SO1), cultural heritage (SO5) and landscape (SO6) through mitigation of emissions and noise on the environment, where traffic is avoided in rural areas and where routes with existing capacity do not impact significantly on landscapes and townscapes. There would also be positive secondary impacts on air quality (SO7) through a reduction in vehicle emissions and focussing on regional interchange centres and inter-urban routes to reduce transport distances. Positive secondary impacts were also highlighted for health and well-being (SO11) and nuisance / access (SO12) through mitigation of emissions and noise.

6.3.6 Impacts on Indicators

The implementation of this Policy will impact on the following indicators:

- Tonnage recycled.
- Tonnage composted.
- Tonnage landfilled.

- Typical energy production (GwH) from Waste facilities.
- Typical amount of job creation (jobs per ha) within the waste industry.

6.3.7 Proposed Mitigation Measures / Recommendations

No mitigation measures have been recommended.

6.4 Landraising

The Government is seeking to encourage the 'recovery' of waste, including its use in construction. The Waste Framework Directive defines recovery as:

“any operation the principal result of which is waste serving a useful purpose by replacing other materials which would have otherwise been used to fulfil a particular function, or waste being prepared to fulfil that function, in the plant or wider economy.”

The Plan highlights that the overriding objective is to ensure that waste recovery and disposal are carried out so as to prevent harm to human health or pollution of the environment in accordance with the Waste Framework Directive.

This definition is sometimes referred to as the 'substitution' principle because in waste recovery operations waste is used as a substitute for a non-waste raw material that would otherwise be used, thereby conserving natural resources. Activities that do not include this re-use and recycling of waste are normally considered as waste disposal.

The Plan adds that landraising, to raise the ground levels of a site, will be only supported in the Plan Area if the development provides a significant benefit that would outweigh any adverse impact caused. Landraising, above the level considered necessary to achieve a beneficial use or land restoration, will not be acceptable. The Waste Planning Authorities will consider whether the proposed landraising development is needed for the purpose of 'recovery' (associated with a genuine use in construction), engineering or is for the 'disposal' of waste on land for any other reason.

Large scale landraising projects could divert inert waste materials from other sites, such as quarries that require such material for restoration, as well as having the potential to cause significant environmental impacts. The plan sets out that an application would therefore need to demonstrate the amount of material imported and deposited would be the minimum necessary to bring about any perceived improvement or benefit and not cause an unreasonable delay in the restoration of mineral sites.

The provision of the Policy are not intended to apply to proposals seeking to achieve post-settlement contouring to existing ground levels associated with landfill operations.

6.4.1 Policy 13: Landraising

Proposals for landraising will only be permitted where it is demonstrated that there are no feasible or practicable alternative means to achieve the proposed development.

Proposals must also demonstrate:

- a. there is a proven significant benefit that outweighs any harm caused by the proposal;
- b. The amount of waste materials used to raise the level of the land is the minimum amount of material necessary and is essential for the restoration of the site; and
- c. In the case of land rehabilitation and other projects, will provide a significant improvement to damaged or degraded land and/or provide a greater environmental or agricultural value than the previous land use.

Proposals for landraising that are considered to constitute a waste disposal activity, for its own sake, will not be permitted.

6.4.2 Significant Effects

	Sustainability Objectives (SO)												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Short Term	++	+	+	++	+	++	0	0	++	0	+	0	++
Medium Term	++	+	+	++	+	++	0	0	++	0	+	0	++
Long Term	++	+	+	++	+	++	0	0	++	0	+	0	++

There are likely to be positive impacts on biodiversity (SO1), the sustainable use of land and agricultural land (SO4), landscape (SO6) and sustainable waste management (SO9) where landraising would only be acceptable for the restoration of mineral extraction sites or for essential engineering projects or where it would provide a significant improvement to damaged or degraded land and/or provide a greater environmental or agricultural land value than the previous land use.. This would also see positive impacts on economic growth through the approach's acknowledgement of the need for inert material for infrastructure projects.

A range of minor positive impacts will additionally be realised due to the approach's restrictions regarding the use of inert material for landraising. This approach will limit the potential negative impacts on water quality (SO2), flooding (SO3), the historic environment (SO5) and well-being (SO11) by ensuring that landraising occurs only where necessary and not to the detriment of these factors as could otherwise be expected with a less restrictive stance.

6.4.3 Temporal Effects

There will be no temporal effects as a result of this Policy at this stage. The Sustainability Appraisal of the potential criteria for a landraising policy in the WDD Issues and Options (2010) document highlighted long term significant positive impacts associated with biodiversity, landscape and the sustainable use of land (SO1, SO6 and SO4) only due to the restoration implications of landraising, however these have been extended into the short and mid-term due to ECC, as the MPA, having a

recently adopted Minerals Local Plan in addition to the need for the restoration of historic landfill sites.

6.4.4 Secondary, Cumulative and Synergistic Effects

There are likely to be positive cumulative and synergistic impacts on the majority of the Sustainability Objectives through all inert landfill and landraise proposals having to meet the policies in the RWLP once adopted. In addition, there will be significant positive impacts associated with the sustainable management of waste (SO9) and landscape (SO6) with this Policy's stance in accumulation with the plan's policy stance on Waste Disposal (Policy 9).

6.4.5 Alternatives Considered

At the Issues and Options stage, suggested policy criteria were put forward for comment in relation to landraising and the use of waste for construction and engineering projects, rather than distinct alternative options being proposed. Suggestions for alternative approaches were requested where respondents did not agree with the suggested policy approach and the significant majority agreed with the suggested policy criteria. The results of this consultation formed the content of the previous Preferred Approach (2010) and Revised Preferred Approach (2015) approaches to landraising. No other alternative approaches have emerged through the plan-making process and the various consultation stages of the Plan (WDD / RWLP) based on the characteristics of the Plan Area and the Plan's evidence base. Despite this, it was considered appropriate to explore at the Revised Preferred Approach (2015) stage, for robustness, a 'more flexible' alternative approach:

- Alternative 1: To adopt a less restrictive 'locational criteria' based approach to landraising - Revised Preferred Approach stage (2015)

	Sustainability Objectives (SO)												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Alternative 1	-	0	0	-	0	-	0	0	--	/	0	0	0
Reasons for rejection: The alternative would not reflect the recycling of inert material as defined within the Waste Hierarchy. In addition, there would be less material available that would be required for restoration purposes; of great benefit and importance within the Plan Area in respect of existing mineral voids and the Plan's approach to Waste Disposal (Policy 9).													

Although not explicit or developed a 'locational criteria' approach to landraising would have significant negative impacts on the sustainable management of waste (SO9). This would respond to a flexible approach to landraising and theoretically making provisions to allow the use of inert material for landraising projects. This would leave less material available for restoration schemes (for mineral extraction sites) and essential engineering projects. There would be negative impacts on biodiversity (SO1) through limiting the amount of inert material needed for restoration to biodiversity. There will also be negative impacts on landscape (SO6) through the possibility of diverting material away from restoration projects. In addition this would not result in a sustainable use of land (SO4) based on an assumption that landraising would occur for comparatively less important schemes (golf courses etc).

6.4.6 Impacts on Indicators

The implementation of this Policy will impact on the following indicators:

- Tonnage recycled.

- Tonnage landfilled.

6.4.7 Proposed Mitigation Measures / Recommendations

No mitigation measures have been recommended

6.5 Landfill Mining and Reclamation

Historically the options for waste management were limited to what would be called 'final disposal' today with little or no recycling or re-use of base materials. Over time, uncontrolled landfilling has been phased out, and more stringent regulatory requirements were imposed to ensure the environment and human health impacts were effectively managed. Landfill is now recognised as the least preferred form of waste management through the waste hierarchy and legislative drivers such as the incrementally increasing Landfill Tax are acting to reduce the viability of landfilling as a means of managing waste.

Despite this, the Plan Area has a legacy associated with historic landfilling operations, with almost 400 historic landfills of various types located across Essex. As resources become scarcer, the value in previously disposed wastes is being increasingly recognised. With the notion of the circular economy gaining momentum, attention is turning towards the potential resource and energy value that could be recovered through extracting material from historic landfills, through a process known as Landfill Mining and Reclamation.

At present, landfill mining schemes are little more than trials, as it is not yet considered to be cost effective at a significant scale. In 2012, Zero Waste Scotland commissioned Ricardo-AEA, to undertake a Scoping Study 'Feasibility and Viability of Landfill Mining and Reclamation in Scotland'. This identified more barriers than drivers for this process at present, although this may change towards the latter parts of this Plan period. In order for the Waste Local Plan to be able to respond to any technological advancement in landfill mining, there is a requirement to set out a policy stance.

The Plan states that landfill mining and reclamation may be required in the Plan Area for reasons not linked to purely economic concerns. Examples could include where the historic landfill site suffers from poor engineering, or if it is currently the cause of significant pollution, environmental or health impacts which justifies its re-opening. However, the mining of waste could cause environmental disturbance and any proposal will need to demonstrate mitigation of any impact on the local environment and amenity. Furthermore, landfills are normally a temporary use of land, which is subsequently returned to its former, or an alternative use, such as agriculture, biodiversity or improvements to local amenity. The Plan indicates that proposals will be considered in terms of their impact on the restored use, and whether there would be an unacceptable impact on any development which has taken place since the closure of the old landfill.

6.5.1 Policy 14: Landfill Mining and Reclamation

Proposals for the mining of landfill sites will be permitted where:

- a. The site (without intervention) is demonstrated to be endangering or has the potential to endanger human health or harm the environment;
- b. Removal is required to facilitate major infrastructure projects and it is demonstrated that there are no other locations which are suitable for the infrastructure; and/or
- c. the waste is demonstrated as suitable for recovery and/or the waste will be captured for fuel/energy as part of the mining operation.

Proposals will be considered in terms of their impact on the restored use, and whether there would be unacceptable impact on any development which has taken place since the closure of the old landfill. Proposals should not cause unacceptable adverse impact on the local environment and amenity.

6.5.2 Significant Effects

	Sustainability Objectives (SO)												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Short Term	+	+	0	0	0	0	0	+	+	0	+	0	+
Medium Term	+	+	0	0	0	0	0	+	+	0	+	0	+
Long Term	/	/	/	/	/	/	/	/	/	/	/	/	/

There will be no significant impacts on any of the Sustainability Objectives through this Policy. There will be minor positive impacts on biodiversity (SO1), water quality (SO2), energy generation (SO8), the sustainable management of waste (SO9), human health (SO11) and economic growth (SO13) through the approach to only permit the mining of waste in instances of sites endangering human health or the environment, or where required to facilitate major infrastructure projects and where there would be additional energy yield. These impacts will not extend into the long term.

6.5.3 Temporal Effects

The long term effects of this Policy are uncertain. This surrounds any newly created void space from mining and these locations may or may not be suitable or sustainable for landfill in line with modern requirements and the Site Assessment Methodology of the RWLP. The Plan states that any widespread re-working could affect the perceived lifetime of sites. Currently landfills are temporary use of land, which would be returned to another use, whether this be for agriculture, biodiversity or local amenity. If old sites are re-opened, this may (re)introduce blight into the area.

6.5.4 Secondary, Cumulative and Synergistic Effects

There may be long term negative synergistic impacts on the Plan's Spatial Strategy where the mining of waste could create new void space for landfill that do not conform to the Spatial Strategy and requirements of void space to serve particular areas / key centres of growth.

6.5.5 Alternatives Considered

The requirement and viability of exploring landfill mining and reclamation was not established at the Issues and Options (2010) or Preferred Approach (2011) stages. As such the issue was not explored and no alternative approaches were developed. Despite this, the absence of a policy on landfill mining and reclamation offers an alternative approach in itself. At the Revised Preferred Approach stage, where the issues was first introduced, the following reasonable alternative was considered:

- Alternative 1: To not have a policy on the mining of waste - Revised Preferred Approach (2015)

	Sustainability Objectives (SO)												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Alternative 1	/	/	0	0	0	0	0	0	0	0	/	0	/

Reasons for rejection: Although in the shorter term it is difficult to see how the reworking of general landfills, notably those containing municipal solid waste, could yield worthwhile revenue to offset the costs (including environmental assessments, securing planning and other consents and any necessary mitigation), the RWLP must remain flexible. As such, this alternative was rejected in favour of including a policy on the mining of waste.

Alternative 1 will have uncertain impacts on the relevant Sustainability Objectives of biodiversity (SO1), water quality (SO2), health (SO11) and economic growth (SO13) where historic landfill sites that can be demonstrated as having health or environmental impacts, or would be required to facilitate major infrastructure projects are not permitted for the mining of waste.

6.5.6 Impacts on Indicators

The implementation of this Policy will impact on the following indicators:

- Tonnage recycled.
- Tonnage composted.
- Tonnage landfilled.
- Typical energy production (GwH) from Waste facilities.
- Typical amount of job creation (jobs per ha) within the waste industry.

6.5.7 Proposed Mitigation Measures / Recommendations

No mitigation measures have been recommended.

7 The Appraisal of the Replacement Waste Local Plan's Site Allocations and Alternatives

7.1 Site Pro forma

Sites have been subjected to appraisal using a pro forma which covers the key issues of the area and all relevant available information across a range of sustainability criteria. In addition, the consultation of the Scoping Report allowed input from the Statutory Consultees and internal specialists as to the suitability of the appraisal criteria.

It is worthy of note that in line with the pro forma, appraisals have not been intended to be a detailed project-level assessment of each site, such as that provided by an Environmental Impact Assessment (EIA), but instead have aimed to provide a strategic level assessment highlighting those broad impacts of the sites to inform the plan-making process. Planning Practice Guidance states that the sustainability appraisal should only focus on what is needed to assess the likely significant effects of the Local Plan. It should focus on the environmental, economic and social impacts that are likely to be significant. It does not need to be done in any more detail, or using more resources, than is considered to be appropriate for the content and level of detail in the Local Plan.

For the purposes of assessing temporal effects associated with site allocations, the long term effects largely respond to the restoration details of landfill sites as temporary in function, or the permanence of non-landfill allocations. Considering this, the long term effects vary for each criterion in the site pro forma and these have been specified.

Annex C shows the site pro forma developed for the appraisal of site allocations. Please note that the appraisal of sites within this report is a separate and independent exercise from that undertaken by Land Use Consultants (LUC) as commissioned by Essex County Council and Southend-on-Sea Borough Council. Although sharing elements of data and evidence, the two site assessment exercises are not directly comparable to each other and have different methodologies.

7.2 Types of facility put forward

Although the plan-making process has been ongoing since the first Issues and Options stage consultation in 2010, it has been acknowledged that the deliverability, viability and suitability of sites can change and has changed since then. As a result, a call-for-sites exercise was undertaken in 2014 in order to identify sites that can reasonably be allocated, or considered for allocation, within the Plan as it progresses to this stage and adoption. As such, the sites identified in this report, including reasonable alternative sites, have been identified since 2014 and throughout the plan-making process since then.

Many sites were promoted by site owners/developers as being suitable for a number of different types of waste facility, and where sites are provisionally viable (see corresponding section on sites excluded from the process) these have all been appraised. In this section sites have been appraised on a facility type basis. As such, allocated or safeguarded sites for one facility type have been rejected for other facility types proposed by the site owner / developer.

For this purpose, waste facilities have been grouped into three broad categories (enclosed waste facilities, enclosed thermal waste facilities and open air waste facilities) to assess their general suitability. The potential sites have been assessed for specific facilities within these three broad categories according to which waste facility types the site promoters had identified for each site. Differences in effects between specific waste facility types have been clearly outlined in the appraisals. The following table sets out the groupings of facility type by broad category.

Table 12: Waste Facility Categories in the Site Assessment Process

Waste Facility	Waste Facility Category used in Site Assessment
Transfer Station	Enclosed Waste Facilities (housed in buildings)
Storage Station	
Materials Recovery Facility (MRF)	
Metal Recycling Facility	
In-vessel Composting Facility (IVC)	
Mechanical Biological Treatment Facility (MBT)	
Combined Heat and Power Facilities (CHP)	Enclosed Thermal Facilities (housed in buildings with flues and digestate piping)
Gasification and Pyrolysis Facilities	
Anaerobic Digesters (AD)	
Autoclaving Facilities	
Construction, Demolition and Excavation Waste (CD&EW) Recycling Facilities (or inert recycling)	Open Air Facilities
End of Life Vehicle (ELV) Recycling Facilities	
Windrow Composting Facilities	
Waste Water Treatment Works (WWTWs)	
Inert Landfill Sites	
Non-hazardous Landfill Sites	
Hazardous Landfill Sites	

7.3 Sites not included within the Sustainability Appraisal process

Planning Practice Guidance states that reasonable alternatives are the different realistic options considered by the plan-maker in developing the policies in its plan. They must be sufficiently distinct to highlight the different sustainability implications of each so that meaningful comparisons can be made. The alternatives must be realistic and deliverable.

As part of the plan-making process, Essex County Council and Southend-on-Sea Borough Council commissioned Land Use Consultants (LUC) to undertake an independent assessment of the suitability of those waste sites submitted for potential inclusion in the emerging Waste Local Plan. As part of this process LUC included initial exclusionary criteria. Those sites that failed the first stage (Stage 1) of this site assessment process have not be included in the Sustainability Appraisal process where they can be considered unviable and therefore for the purposes of the Sustainability Appraisal process, 'unreasonable alternatives.' This approach is in line with PAS Guidance on the filtering of options.

For reference, those sites that failed any of the criteria within the following table have been excluded from, or 'filtered out' of, the Sustainability Appraisal process. Sites that do not satisfy these criteria are not 'reasonable' alternatives and should be discounted.

Table 13: The Stage 1 Exclusionary, Discretionary or Deliverability Criteria of the Site Assessment Process

Criteria	Justification	Judgements
1A: Site Size, Area and Shape	All proposals must demonstrate that they can be satisfactorily accommodated on site. Vehicles must be able to manoeuvre satisfactorily and sufficient land must be available for any required mitigation measures, such as planting and landscaping. Most waste management facilities need sites of at least 0.5 ha to accommodate buildings and circulation areas. However, ECC's emerging Employment Land Review used 0.65 ha as the minimum requirement.	Any sites less than 0.65ha in area are likely to be too small to accommodate a standalone waste management facility and have therefore been excluded. Sites over 0.65ha with a shape likely to affect the operational abilities of standalone waste management facilities have been excluded (e.g. a very thin site which would restrict circulation of vehicles).
1B: Availability	The facility proposed must be deliverable in planning terms within the plan period (2014 to 2032).	Sites with site owners unable or unwilling to make a site available for a suitable waste use during the plan period (2014 to 2031) will be excluded. An existing/potential voidspace (acknowledged in the WLP and MLP) must be available if a site is to be suitable for landfill. Sites without a suitable voidspace will be excluded from use as a landfill site.

Criteria	Justification	Judgements
		Allocated for another conflicting use in relevant District or Borough Local Plans or LDF Documents (e.g. residential or retail uses)
1C: Flood Risk	<p>Paragraph 100 in the NPPF and the Technical Guidance on Flood Risk require Local Plans to apply a sequential, risk-based approach to the location of development to avoid where possible flood risk to people and property and manage any residual risk, taking account of the impacts of climate change and giving preference to locating development in Flood Zone 1, followed by Flood Zone 2 then Flood Zone 3. Table 2 (Flood Risk Vulnerability Classification) in the National Planning Practice Guidance outlines the flood risk vulnerability classifications. Landfill sites and waste management facilities for hazardous waste are considered to be more vulnerable, which means that they are potentially incompatible with flood zones 2 and 3. Other waste, water and sewage treatment works are considered less vulnerable, which means that they are potentially compatible with most flood zones with the exception of flood zone 3b, the functional floodplain.</p>	Landfill sites within Flood Zone 3 will be excluded unless they can be justified through Sequential and Exception Tests and the consideration of flood protection/mitigation measures.
1D: Ground Water Vulnerability	<p>The risk of leachate from landfill sites and other ground contamination from other waste facilities requires careful consideration of the hydro-geology within and surrounding a site.</p> <p>Ground water Source Protection Zones (SPZs) are defined in the Policy and Practice for the Protection of Groundwater (Environment Agency 1998), and there is a general presumption against waste management facilities in ground water source protection zones to protect public water supply abstractions from pollution. However, this mainly applies to landfills and not other waste management facilities. The EA Regulatory Guidance Note 3 'Groundwater Protection: Locational aspects of Landfills in Planning Consultation Responses and Permitting Decisions' states that the EA will object to any proposed landfill in SPZ 1 and that for all other proposed landfill locations a risk assessment must be conducted, because of the long term management requirements associated with landfill.</p> <p>For non-landfill waste operations within SPZ 1, the EA would only object to proposals for new development where they believe the operation poses an intrinsic</p>	Sites within Source Protection Zone 1 (SPZ 1) are unsuitable for landfill and will therefore be excluded.

Criteria	Justification	Judgements
	<p>hazard to groundwater quality. Outside SPZ 1, the EA will agree to proposals for new developments of non-landfill waste operations where risks can be appropriately controlled by an Environmental Permit or the terms and conditions of a relevant waste exemption. Therefore, SPZ 1 should not be an exclusionary criterion for non-landfill operations.</p>	
<p>1E: International and National Ecology, Heritage and Landscape Designations</p>	<p>Paragraphs 118-119 of the NPPF discourage development that would adversely affect international and national biodiversity designations. International and national ecological designations have statutory protection through international and EU conventions (Ramsar, 1971; Bern, 1979; Bonn, 1979) and directives (79/409/EEC; 92/43/EC) or should receive the highest possible planning protection.</p> <p>Paragraph 115 in the NPPF states that great weight should be given to conserving landscape and scenic beauty in National Parks and Areas of Outstanding Natural Beauty (AONBs), which have the highest status of protection in relation to landscape and scenic beauty. National landscape designations are protected through the National Parks and Access to the Countryside Act (1949) and the Countryside and Rights of Way Act (2000).</p> <p>Paragraph 132 in the NPPF states that substantial harm to or loss of a grade II listed building, park or garden should be exceptional. Substantial harm to or loss of designated heritage assets of the highest significance, notably scheduled monuments, protected wreck sites, battlefields, grade I and II* listed buildings, grade I and II* registered parks and gardens, and World Heritage Sites, should be wholly exceptional, in accordance with the Planning (Listed Building & Conservation Areas Act 1990).</p>	<p>Sites adjacent to, partly or wholly within international and national ecological designations, including RAMSAR, SPA, SAC, SSSIs and National Nature Reserves will be excluded.</p> <p>Sites within National Park or Areas of Outstanding Natural Beauty (AONB) will be excluded.</p> <p>Sites containing or within 250m of (to approximate their setting) the following international and national heritage designations, World Heritage Sites, Grade I and II* Registered Parks and Gardens and Registered Battlefields, Scheduled Monuments, Grade I and II* listed buildings and Conservation Areas will be excluded.</p>

In line with the above exclusionary criteria as used by consultants LUC, and shared in the SA process to sieve out unreasonable alternatives, the following table shows those sites that have been excluded and the specific reason for each.

Table 14: Sites excluded having failed the Stage 1 Exclusionary Criteria of the Site Assessment Process

Site Reference	Site Name	Reasons for Exclusion
L(n)2R	Martell's	The site is not allocated in the Minerals Local Plan and therefore there is no available void suitable for landfill. Furthermore, the site borders a SSSI and Scheduled Monument.
L(n)3	Crumps Farm, Lt Canfield	While parts of the site are located within Flood Zone 3, these are relatively small when compared to the size of the site. The planning permission of the current operation on the site ensures that there will be no impacts resulting from the allocated use. The site is not allocated in the Minerals Local Plan, and therefore there is no available void suitable for landfill. However, the site promoter confirmed that they are not proposing landfill on this site, so the same site has been coded as W32 and considered for the other waste facility types proposed.
L(n)4	Barling Landfill, off Mucking Hall Road	The site is partly within a Ramsar site, SPA, SAC and SSSI and most of the site sits within Flood Zone 3.
L(i)3R	Tile Kiln, Valley farm, Sible Hedingham	The site is not allocated in the Minerals Local Plan and therefore there is no void space suitable for landfill.
L(i)8	Armigers Farm, Uttlesford	The site is not allocated in the Minerals Local Plan, and therefore there is no available void suitable for landfill.
W2	Units 5-7 Hallsford Bridge Industrial Estate	The site is likely to be too small (0.337ha) to accommodate a waste management facility.
W28	Barling Landfill, off Mucking Hall Road	The site is partly within a Ramsar, SPA, SAC and SSSI and most of the site sits within Flood Zone 3.
IWMF1	IWMF Stanway, Colchester	Site owner unable to offer confirmation that the site would be available for a suitable waste use during the plan period (2014 to 2031).

7.4 Sites included within the Sustainability Appraisal Process

A number of sites have been assessed in this Environmental Report. These respond to sites that have been identified as allocated in the Plan and those that are non-preferred and as such unallocated in the Plan. Site appraisals have also been undertaken for facilities for which there is no identified requirement in the Local Plan. The appraisal of sites in this document corresponds to all those that have come forward from the Plan's call-for-sites, and also for the various different waste facilities or uses that were identified for each site by the site owner / developer. This

thorough appraisal responds to the requirement for the Sustainability Appraisal to appraise all reasonable alternatives.

The following table outlines those sites appraised within the Sustainability Appraisal process and for the range of facilities that were proposed for each site by the site owner / developer. Those sites in grey represent those that have changed since the Revised Preferred Approach (2015) stage of the Plan. Commentary alongside each change offers further explanation in each instance.

Table 15: Potential facility types on sites put forward (as per site owner / developer)

Site Reference	Site Name	Potential Facility Types (as per site owner / developer)
IWMF2	Rivenhall Site, Braintree	Recycling – Materials Recovery Facility; Treatment – Mechanical Biological Treatment; Energy from waste – Combined Heat & Power; Treatment – Anaerobic Digestion/Biogas
IWMF3	Tovi EcoPark, Courtauld Road, Basildon	Recycling – Materials Recovery Facility; Treatment – Mechanical Biological Treatment
L(i)3R	Tile Kiln, Valley Farm, Sible Hedingham, Braintree	Recycling – CD&EW inert/soil screening; Landfill – Inert
L(i)4R	Shellow Cross Farm, Willingale, Chelmsford / Epping	Recycling – CD&EW inert/soil screening; Landfill – Inert
L(i)5	Sunnymead, Elmstead & Heath Farms, Alresford, Tendring	Landfill – Inert
L(i)6	Sandon, Chelmsford	Landfill – Inert
L(i)7	Fiveways Fruit Farm, Colchester	Recycling – CD&EW inert/soil screening, Recycling – CD&EW non-inert; Landfill – Inert
L(i)10R	Blackley Quarry, Gate Farm Site 1, Chelmsford	Recycling – Materials Recovery Facility; Recycling – CD&EW inert/soil screening; Recycling – CD&EW non-inert; Landfill – Inert
L(i)13R	Wellwick, Martins Farm, St Oysth, Tendring	Landfill – Inert
L(i)15	Fingringhoe Quarry 1, Colchester	Landfill – Inert
L(i)16	Dollymans Farm, Doublegate Lane, Basildon / Rochford	Landfill – Inert; Landfill – Non-hazardous; Landfill - Non-inert

Site Reference	Site Name	Potential Facility Types (as per site owner / developer)
L(i)17R	Newport Quarry, Uttlesford	Recycling – CD&EW inert/soil screening; Recycling – CD&EW non-inert; Landfill – Inert <i>This is a new site that has been promoted as a result of the Revised Preferred Approach 2015 consultation</i>
L(n)1R	Slough Farm, Ardleigh – Area 1, Tendring	Recycling – CD&EW inert/soil screening; Recycling – CD&EW non-inert; Landfill – Inert; Landfill – Non-hazardous; Landfill - Non-inert
L(n)2R	Martell's, Tendring	Recycling – CD&EW inert/soil screening; Recycling – CD&EW non-inert; Landfill – Inert; Landfill – Non-hazardous; Landfill - Non-inert
L(n)3	Crumps Farm, Lt Canfield, Uttlesford	Recycling – Materials Recovery Facility; Composting – In-vessel; Treatment – Mechanical Biological Treatment; Treatment – Anaerobic Digestion/Biogas; Treatment – Autoclaving; Recycling – CD&EW inert/soil screening; Recycling – CD&EW non-inert; Landfill – Inert, Landfill – Non-hazardous; Landfill - Non-inert
L(n)4	Barling landfill – Off Mucking Hall Road, SS3 0NR, Rochford	Landfill – Inert; Landfill – Non-hazardous; Landfill - Non-inert
L(n)5	Bellhouse Landfill Site, Warren Lane, Colchester	Landfill – Inert; Landfill – Non-hazardous; Landfill - Non-inert
L(n)6R	Pitsea Landfill, Pitsea Hall Lane, Basildon	Recycling – CD&EW inert/soil screening; Landfill – Non-hazardous; Landfill - Non-inert
L(n)7R	Little Bullocks Farm Site A22, Uttlesford	Recycling – CD&EW inert/soil screening; Recycling – CD&EW non-inert; Landfill – Inert; Landfill – Non-hazardous; Landfill - Non-inert
L(n)8R	Little Bullocks Farm Site A23, Uttlesford	Recycling – CD&EW inert/soil screening; Recycling – CD&EW non-inert; Landfill – Inert; Landfill – Non-hazardous; Landfill - Non-inert; Landfill – Hazardous
W1	Green Acres, Old Packards Lane, Wormingford, Colchester	Transfer – Transfer station; Recycling – Materials Recovery Facility; Treatment – Mechanical Biological Treatment; Treatment – Anaerobic Digestion/Biogas; Treatment – Autoclaving; Recycling – CD&EW inert/soil screening; Recycling – CD&EW non-inert
W2	Units 5-7, Hallsford Bridge Industrial Estate, Ongar, Brentwood	Transfer – Transfer station; Transfer – Waste storage

Site Reference	Site Name	Potential Facility Types (as per site owner / developer)
W3	Basildon WWTW 1, Courtauld Road, Basildon	Transfer – Transfer station; Recycling – Materials Recovery Facility; Composting – In-vessel; Energy from waste – Combined Heat & Power; Treatment – Anaerobic Digestion/Biogas; Recycling – CD&EW inert/soil screening; Recycling – CD&EW non-inert
W7	Sandon East, Chelmsford	Transfer – Transfer station; Transfer – Waste storage; Recycling – Materials Recovery Facility; Composting – In-vessel; Treatment – Mechanical Biological Treatment; Energy from waste – Combined Heat & Power; Energy from waste – Gasification & Pyrolysis; Treatment – Anaerobic Digestion/Biogas; Treatment – Autoclaving; Recycling – CD&EW inert/soil screening; Recycling – CD&EW non-inert; Composting – Windrow
W8	Elsenham, Uttlesford	Transfer – Transfer station; Transfer – Waste storage; Recycling – Materials Recovery Facility; Composting – In-vessel; Treatment – Mechanical Biological Treatment; Energy from waste – Combined Heat & Power; Energy from waste – Gasification & Pyrolysis; Treatment – Anaerobic Digestion/Biogas; Treatment – Autoclaving; Recycling – CD&EW inert/soil screening; Recycling – CD&EW non-inert; Composting – Windrow
W9	Great Dunmow, Uttlesford	Transfer – Transfer station
W10	Harlow, Harlow	Transfer – Transfer station
W12	Ballast Quay, Fingringhoe, Colchester	Transfer – Waste Transfer Station <i>Since the Revised Preferred Approach (2015) consultation the site owner / developer has specified that the site should not be considered for waste storage, but for a waste transshipment facility.</i>
W13	Wivenhoe Quarry Plant Area, Colchester	Recycling – CD&EW inert/soil screening <i>Since the Revised Preferred Approach (2015) stage, the site owner / developer has specified that Treatment – Anaerobic Digestion/Biogas is no longer promoted for consideration on the site.</i>
W14	Alresford, Tendring	Recycling – CD&EW inert/soil screening; Recycling – CD&EW non-inert
W15	Wellwick, Martins Farm, St Osyth, Tendring	Recycling – Materials Recovery Facility; Recycling – CD&EW inert/soil screening

Site Reference	Site Name	Potential Facility Types (as per site owner / developer)
W16	Eastern Avenue, Southend	Transfer – Transfer station; Recycling – Materials Recovery Facility
W17	Allens Farm, Wivenhoe Road, Colchester, CO7 7BN	Treatment – Anaerobic Digestion/Biogas
W18	Batemans Farm, Lynderswood Lane, Braintree / Chelmsford	Transfer – Transfer station; Transfer – Waste storage; Recycling – CD&EW inert/soil screening; Recycling – CD&EW non-inert
W19	Hastingwood, London Road, Harlow	Recycling – CD&EW inert/soil screening; Recycling – CD&EW non-inert
W20	Courtauld Road, Burnt Mills, Basildon	Composting – In-vessel; Treatment – Anaerobic Digestion/Biogas
W21	Dollymans Farm, Doublegate Lane, Basildon / Rochford	Transfer – Transfer station; Transfer – Waste storage; Recycling – Materials Recovery Facility; Recycling – Metal recycling Site; Composting – In-vessel; Treatment – Anaerobic Digestion/Biogas; Recycling – CD&EW inert/soil screening; Recycling – CD&EW non-inert; Recycling – End of Life Vehicle Facility; Composting – Windrow;
W22	Michelins Farm, Arterial Road, Rayleigh, Rochford	Transfer – Transfer station; Transfer – Waste storage <i>The site is an Area of Search in the Plan and it could be developed as a transfer station if required in the Plan period. At the Revised Preferred Approach (2015) stage, the site was a preferred 'Opportunity Site' due to scoring highly in the Site Assessment Report; however the concept of Opportunity Sites has been dropped in the Plan following consultation. Under Policy NEL1 in the adopted Rochford District Council Allocations Plan 2014, the site has been allocated to accommodate future displaced heavier industrial uses from the Rawreth Industrial Estate (being redeveloped under policy BFR4), whilst land is also set aside for a new 1.2ha Waste Recycling Centre. That it is considered that the site could house waste facilities in the future is in accordance with the concept of Areas of Search and therefore this designation remains in the emerging Waste Local Plan.</i>
W23	Station Yard, Bentley Road, Tendring	Recycling – Metal recycling Site; Recycling – End of Life Vehicle Facility
W24	Widdington, Hollow	Transfer – Transfer station; Transfer – Waste storage; Recycling – CD&EW inert/soil screening; Recycling – CD&EW non-inert;

Site Reference	Site Name	Potential Facility Types (as per site owner / developer)
	Road, Uttlesford	Composting – Windrow
W25	Fairfield Road, Fordham Road, Colchester	Composting – Windrow <i>This site has since been withdrawn by the site owner / developer.</i>
W26	Winsford Way, Chelmsford	Transfer – Transfer station
W27	Friern Manor, Land South of the A127, Basildon / Brentwood	Energy from waste – Combined Heat & Power
W28	Barling Landfill, Off Mucking Hall Road, SS3 0NR, Rochford	Composting – Windrow
W29	Bellhouse Landfill Site, Warren lane, Colchester	Transfer – Transfer station; Transfer – Waste storage; Treatment – Mechanical Biological Treatment; Treatment – Anaerobic Digestion/Biogas; Treatment – Autoclaving; Composting – Windrow
W30	Pitsea Landfill, Pitsea Hall Lane, Basildon	Transfer – Transfer station; Transfer – Waste storage; Composting – In-vessel; Composting – Windrow
W31	Morses Lane, Brightlingsea, Tendring	Transfer – Transfer station; Transfer – Waste storage; Recycling – CD&EW non-inert; Energy from waste – Combined Heat & Power; Energy from waste – Gasification & Pyrolysis; Treatment – Anaerobic Digestion/Biogas; Treatment – Autoclaving; Recycling – CD&EW inert/soil screening; Recycling – Materials Recovery Facility
W32	Crumps Farm, Lt Canfield, Uttlesford	Recycling – CD&EW non-inert; Composting – In-vessel; Treatment – Mechanical Biological Treatment; Treatment – Anaerobic Digestion/Biogas; Recycling – CD&EW inert/soil screening; Recycling – Materials Recovery Facility
W33	Ardleigh off the A120, Tendring	Transfer – Transfer Station
W34	Cordons Farm, Braintree	Transfer – Transfer Station
W35	Armigers Farm, Uttlesford	Recycling – Materials Recovery Facility; Recycling – C&D inert/soil screening; Recycling – C&D non-inert
SIE5	The Basketworks,	Transfer – Transfer station; Transfer – Waste storage; Recycling

Site Reference	Site Name	Potential Facility Types (as per site owner / developer)
	Grange Road, Tiptree, Colchester	– Materials Recovery Facility; Recycling – Metal recycling Site; Composting – In-vessel; Treatment – Mechanical Biological Treatment; Treatment – Anaerobic Digestion/Biogas; Treatment – Autoclaving; Recycling – CD&EW inert/soil screening; Recycling – CD&EW non-inert; Recycling – End of Life Vehicle Facility

7.5 Assumptions made in the Sustainability Appraisal process

Although the appraisal of sites in this report uses general location based criteria, some facility types will be able to mitigate impacts more easily than others. Sites have been appraised using some basic assumptions related to whether the site is enclosed, enclosed thermal or open air. Similarly the long term impacts of landfill sites have been reflected to encompass the assumed impacts of the site being restored to the site's original use or condition. The site pro forma in Annex C accompanying this report elaborates on which objectives this approach has been deemed relevant for.

It should be noted that some non-landfill uses may also be temporary; however the appraisal looks at the same long term implications of permanent sites. This is to assess their suitability as permanent sites within the Plan period and to cover the requirement of addressing this possibility for robustness.

It is the government's stance that specific facility types not be highlighted in order to reduce waste to landfill in conformity with moving waste up the waste hierarchy. The Plan adopts this approach regarding those sites put forward for biological treatment facilities. As such, allocated sites have been highlighted for all those biological treatment facility types that were put forward for each site in the call-for-sites by the site owner / developer. Biological treatment covers a range of enclosed, enclosed thermal and open air facility types, which have different sustainability criteria, and the Plan's stance of not allocating specific biological treatment facility types in accordance with national policy. This means that allocated sites for biological treatment have been allocated for all relevant facility types for biological treatment as they appear in this report; however it does not mean that allocated sites would be suitable for all biological treatment facility types and in any instance would still be subject to the planning application process and permission being granted. This report intends to highlight which facility types would be more suitable for each allocation site. For the purposes of this appraisal and for reference, the biological treatment facility types are:

- In-Vessel Composting (ILV) – Enclosed
- Anaerobic Digestion / Biogas (AD) – Enclosed / Enclosed Thermal
- Windrow / Open-Windrow Composting (OWC) – Open Air

The appraisal of sites will help to identify sites as more or less appropriate for certain uses when they have been proposed / put forward for a range of uses, and allows a better degree of accuracy against which to compare sites for each specific facility type.

7.6 The Appraisal of Enclosed Waste Facilities

Enclosed waste facilities are those housed in buildings. The broad category of waste facility types described as enclosed for the purposes of this section, are listed below. The facility types are:

- Transfer Stations
- Waste Storage (Stations)
- Materials Recovery Facilities
- Metal Recycling Facilities
- In-Vessel Composting Facilities
- Mechanical Biological treatment Facilities

It should be noted that the status of LACW Transfer Stations have changed since the Revised Preferred Approach (2015). LACW Transfer Stations were previously considered 'strategic' and allocated within the Revised Preferred Approach RWLP (2015) however are now 'safeguarded' in the Pre-Submission Plan. This is due to their significant contribution in meeting the requirements for recycling and recovery, in ensuring waste is transported to the IWMF site in Basildon and most importantly due to the fact that they are all now operational with planning permission

Sites highlighted in grey represent those sites for which the status has changed or an amendment in the highlighted impacts has been made following re-assessment since the revised Preferred Approach (2015).

Table 16: Appraisal of sites put forward for Enclosed Waste Facilities: Transfer Stations

Sites for: TRANSFER STATIONS														
Site Ref.	Temp Effect	Sustainability Objectives (SO)												
		1	2	3	4	5	6	7	8	9	10	11	12	13
W1	S / M	+	-	++	++	+	++	/	0	++	--	/	--	++
	L	+	-	++	++	+	++	/	0	++	--	/	--	++
Reason for rejection:		The site is not considered to be suitable in Highway Terms and/or does not comply with Transport Policy.												
W3	S / M	+	-	/	++	+	++	++	0	++	+	-	++	++
	L	+	-	/	++	+	++	++	0	++	+	/	++	++
Reason for rejection:		<p>Not needed for use as a Transfer Station. Has been allocated in the Plan for another use.</p> <p><i>An amendment to the impacts previously highlighted in the SA of the Revised Preferred Approach (2015) regarding health and well-being (SO11) on Site W3 (Basildon WWTW) has also been made. This is due to there being sensitive receptors within 250m of the site. As such the previously highlighted uncertain impacts are now judged to be negative. The site is also now recognised as being in FZ2 (previously erroneously judged to be in FZ1 for some uses) which sees an amendment to the impacts highlighted for flooding (SO3) as uncertain, where previously they were considered significantly positive.</i></p>												

W7	S / M	+	-	--	/	/	+	++	0	++	/	/	+	++
	L	+	-	--	/	/	+	++	0	++	/	/	+	++
Reason for rejection:		Not needed for use as a Transfer Station. Has been allocated in the Plan for another use.												
W8	S / M	+	++	++	/	-	-	/	0	+	+	-	++	/
	L	+	++	++	/	-	-	/	0	+	+	/	++	/
Reason for rejection:		<p>Not needed for use as a Transfer Station. Has been allocated in the Plan for another use.</p> <p><i>An amendment has been made since the SA of the Revised Preferred Approach (2015) regarding historic environment impacts at W8 - Elsenham. Uncertain impacts were previously highlighted for certain facility types due to moderate issues regarding the historic environment (SO5), however a re-assessment of the site has led to a major impact issue (which may be acceptable subject to mitigation) being highlighted for all facility types. As such impacts are now negative.</i></p>												
W9	S / M	++	-	++	++	++	+	++	0	++	+	-	++	/
	L	++	-	++	++	++	+	++	0	++	+	/	++	/
Safeguarded Site – Reason for safeguarding:		The site scored highly against other sites considered for allocation in the Waste Site Assessment Report. It is also considered suitable due to having planning permission in accordance with the Joint Waste Management Strategy and is currently operational. It also conforms to the general principles of the Spatial Strategy and the proximity principle.												
W10	S / M	++	++	++	++	++	++	++	0	++	+	-	++	+
	L	++	++	++	++	++	++	++	0	++	+	/	++	+
Safeguarded Site – Reason for safeguarding:		The site scored highly against other sites considered for allocation in the Waste Site Assessment Report. It is also considered suitable due to having planning permission in accordance with the Joint Waste Management Strategy and is currently operational. It also conforms to the general principles of the Spatial Strategy and the proximity principle.												
W12	S / M	/	-	--	++	++	/	/	0	++	++	-	++	++
	L	/	-	--	++	++	/	/	0	++	++	/	++	++
Reason for rejection:		<p>Not as sustainable, and did not score as highly as other sites considered for allocation in the Waste Site Assessment Report.</p> <p><i>Since the Revised Preferred Approach (2015) consultation the site owner / developer has requested the site be considered for a waste transshipment facility.</i></p> <p><i>Since the Revised Preferred Approach (2015) consultation, an amendment has been made to historic environment impacts previously highlighted in the SA. The previous positive impact is now considered a significant</i></p>												

		<i>positive impact in line with a re-assessment of the site.</i>													
W16	S / M	++	++	++	++	++	++	++	0	++	/		-	/	++
	L	++	++	++	++	++	++	++	0	++	/	/	/	/	++
Safeguarded Site – Reason for safeguarding:		The site scored highly against other sites considered for allocation in the Waste Site Assessment Report. It is also considered suitable due to having planning permission in accordance with the Joint Waste Management Strategy and is currently operational. It also conforms to the general principles of the Spatial Strategy and the proximity principle.													
W18	S / M	+	++	++	++	+	/	/	0	++	--	-	--	++	
	L	+	++	++	++	+	/	/	0	++	--	/	--	++	
Reason for rejection:		The site is not considered to be suitable in Highway Terms and/or does not comply with Transport Policy.													
W21	S / M	+	-	--	/	+	--	++	0	+	+	--	++	++	
	L	+	-	--	/	+	--	++	0	+	+	/	++	++	
Reason for rejection:		The site is within the Green Belt.													
W22	S / M	+	-	++	/	/	+	++	0	++	/	-	+	++	
	L	+	-	++	/	/	+	++	0	++	/	/	+	++	
Reason for rejection:		<p>Not specifically needed for use as a Transfer Station.</p> <p><i>The site is an Area of Search in the Plan and it could be developed as a transfer station if required in the Plan period. At the Revised Preferred Approach (2015) stage, the site was a preferred 'Opportunity Site' due to scoring highly in the Site Assessment Report; however the concept of Opportunity Sites has been dropped in the Plan following consultation. Under Policy NEL1 in the adopted Rochford District Council Allocations Plan 2014, the site has been allocated to accommodate future displaced heavier industrial uses from the Rawreth Industrial Estate (being redeveloped under policy BFR4), whilst land is also set aside for a new 1.2ha Waste Recycling Centre. That it is considered that the site could house waste facilities in the future is in accordance with the concept of Areas of Search and therefore this designation remains in the emerging Waste Local Plan.</i></p> <p><i>The impacts regarding the sustainable management of waste (SO9) have been amended from positive in the Revised Preferred Approach (2015) SA, to significantly positive.</i></p>													
W24	S / M	+	-	++	-	++	/	++	0	++	--	/	--	-	
	L	+	-	++	-	++	/	++	0	++	--	/	--	-	
Reason for rejection:		The site is not considered to be suitable in Highway Terms and/or does not comply with Transport Policy.													

W26	S / M	+	++	++	++	+	/	++	0	++	+	-	++	++
	L	+	++	++	++	+	/	++	0	++	+	/	++	++
Safeguarded Site – Reason for safeguarding:		<p>The site scored highly against other sites considered for allocation in the Waste Site Assessment Report. It is also considered suitable due to having planning permission in accordance with the Joint Waste Management Strategy and is currently operational. It also conforms to the general principles of the Spatial Strategy and the proximity principle.</p> <p><i>An amendment to the impact highlighted for the historic environment (SO5) in the SA at the Revised Preferred Approach (2015) stage has been necessary to factor in the site's proximity to a Grade II listed building whose setting will need to be considered as part of a heritage impact assessment. As such previously stated significant positive impacts are now minor positive.</i></p>												
W29	S / M	/	-	++	++	+	+	/	0	+	+	--	++	++
	L	/	-	++	++	+	+	/	0	+	+	/	++	++
Reason for rejection:		Not needed for use as a Transfer Station. Has been allocated in the Plan for another use.												
W30	S / M	-	-	--	/	+	--	/	0	++	+	-	++	++
	L	-	-	--	/	+	--	/	0	++	+	/	++	++
Reason for rejection:		The site is within the Greenbelt.												
W31	S / M	+	++	++	/	/	/	/	0	++	+	-	++	++
	L	+	++	++	/	/	/	/	0	++	+	/	++	++
Reason for rejection:		<p>Not needed for use as a Transfer Station. Has been allocated in the Plan for another use.</p> <p><i>An amendment since the Revised Preferred Approach (2015) stage SA regards the previous positive impact stated for the sustainable management of waste (SO9). This has been amended to a significant positive impacts associated with its positive waste use / permission history.</i></p>												
W33	S / M	+	++	++	++	/	/	++	0	++	+	-	++	++
	L	+	++	++	++	/	/	++	0	++	+	/	++	++
Safeguarded Site – Reason for safeguarding:		<p>The site scored highly against other sites considered for allocation in the Waste Site Assessment Report. It is also considered suitable due to having planning permission in accordance with the Joint Waste Management Strategy and is currently operational. It also conforms to the general principles of the Spatial Strategy and the proximity principle.</p> <p><i>An erroneous significantly negative impact for the sustainable use of land (SO4) was highlighted in the SA at the Revised Preferred Approach (2015) stage. This has since been amended to significantly positive to reflect the fact that a municipal waste transfer station and associated infrastructure</i></p>												

		<i>has been constructed and is operational on the site.</i>												
W34	S / M	+	++	++	++	++	/	++	0	++	+	-	++	+
	L	+	++	++	++	++	/	++	0	++	+	/	++	+
Safeguarded Site – Reason for safeguarding:		The site scored highly against other sites considered for allocation in the Waste Site Assessment Report. It is also considered suitable due to having planning permission in accordance with the Joint Waste Management Strategy and is currently operational. It also conforms to the general principles of the Spatial Strategy and the proximity principle.												
SIE5	S / M	+	++	++	++	++	+	/	0	++	--	++	++	++
	L	+	++	++	++	++	+	/	0	++	--	/	++	++
Reason for rejection:		<i>The site has also been re-assessed since the Revised Preferred Approach (2015) stage as not being suitable in Highway Terms and/or not complying with Transport Policy.</i>												

Table 17: Appraisal of sites put forward for Enclosed Waste Facilities: Storage facilities

Sites for: STORAGE FACILITIES														
Site Ref.	Temp Effect	Sustainability Objectives (SO)												
		1	2	3	4	5	6	7	8	9	10	11	12	13
W7	S / M	+	-	--	/	/	+	++	0	++	/	/	+	++
	L	+	-	--	/	/	+	++	0	++	/	/	+	++
Reason for rejection:		No new storage facilities have been deemed necessary to specifically allocate within the Plan.												
W8	S / M	+	++	++	/	-	-	/	0	+	+	-	++	/
	L	+	++	++	/	-	-	/	0	+	+	/	++	/
Reason for rejection:		No new storage facilities have been deemed necessary to specifically allocate within the Plan. <i>An amendment has been made since the SA of the Revised Preferred Approach (2015) regarding historic environment impacts at W8 - Elsenham. Uncertain impacts were previously highlighted for certain facility types due to moderate issues regarding the historic environment (SO5), however a re-assessment of the site has led to a major impact issue (which may be acceptable subject to mitigation) being highlighted for all facility types. As such impacts are now negative.</i>												
W12	S / M	/	-	--	++	++	/	/	0	++	++	-	++	++
	L	/	-	--	++	++	/	/	0	++	++	/	++	++
Reason for rejection:		No new storage facilities have been deemed necessary to specifically allocate within the Plan.												

		<p><i>Since the Revised Preferred Approach (2015) consultation the site owner / developer has specified that the site should not be considered for waste storage, but for a waste transshipment facility.</i></p> <p><i>Since the Revised Preferred Approach (2015) consultation, an amendment has been made to historic environment impacts previously highlighted in the SA. The previous positive impact is now considered a significant positive impact in line with a re-assessment of the site.</i></p>												
W18	S / M	+	++	++	++	+	/	/	0	++	--	-	--	++
	L	+	++	++	++	+	/	/	0	++	--	/	--	++
Reason for rejection		No new storage facilities have been deemed necessary to specifically allocate within the Plan.												
W21	S / M	+	-	--	/	+	--	++	0	+	+	--	++	++
	L	+	-	--	/	+	--	++	0	+	+	/	++	++
Reason for rejection:		No new storage facilities have been deemed necessary to specifically allocate within the Plan.												
W22	S / M	+	-	++	/	/	+	++	0	++	/	-	+	++
	L	+	-	++	/	/	+	++	0	++	/	/	+	++
Reason for rejection:		<p>Not specifically needed for use as a storage facility.</p> <p><i>The site is an Area of Search in the Plan and it could be developed as a transfer station if required in the Plan period. At the Revised Preferred Approach (2015) stage, the site was a preferred 'Opportunity Site' due to scoring highly in the Site Assessment Report; however the concept of Opportunity Sites has been dropped in the Plan following consultation. Under Policy NEL1 in the adopted Rochford District Council Allocations Plan 2014, the site has been allocated to accommodate future displaced heavier industrial uses from the Rawreth Industrial Estate (being redeveloped under policy BFR4), whilst land is also set aside for a new 1.2ha Waste Recycling Centre. That it is considered that the site could house waste facilities in the future is in accordance with the concept of Areas of Search and therefore this designation remains in the emerging Waste Local Plan.</i></p> <p><i>The impacts regarding the sustainable management of waste (SO9) have been amended from positive in the Revised Preferred Approach (2015) SA, to significantly positive.</i></p>												
W24	S / M	+	-	++	-	++	/	++	0	++	--	/	--	-
	L	+	-	++	-	++	/	++	0	++	--	/	--	-
Reason for rejection		No new storage facilities have been deemed necessary to specifically allocate within the Plan. Also, the site is not considered to be suitable in Highway Terms and/or does not comply with Transport Policy.												
W29	S / M	/	-	++	++	+	+	/	0	+	+	--	++	++

	L	/	-	++	++	+	+	/	0	+	+	/	++	++
Reason for rejection:		No new storage facilities have been deemed necessary to specifically allocate within the Plan.												
W30	S / M	-	-	--	/	+	--	/	0	++	+	-	++	++
	L	-	-	--	/	+	--	/	0	++	+	/	++	++
Reason for rejection:		No new storage facilities have been deemed necessary to specifically allocate within the Plan.												
W31	S / M	+	++	++	/	/	/	/	0	++	+	-	++	++
	L	+	++	++	/	/	/	/	0	++	+	/	++	++
Reason for rejection:		No new storage facilities have been deemed necessary to specifically allocate within the Plan. <i>An amendment since the Revised Preferred Approach (2015) stage SA regards the previous positive impact stated for the sustainable management of waste (SO9). This has been amended to a significant positive impacts associated with its positive waste use / permission history.</i>												
W32	S / M	/	-	--	-	/	-	/	0	+	+	/	++	+
	L	/	-	--	-	/	-	/	0	+	+	/	++	+
Reason for rejection:		No new storage facilities have been deemed necessary to specifically allocate within the Plan. <i>W32 Crumps Farm will see an amendment from the Revised Preferred Approach (2015) SA. This responds to impacts regarding the sustainable management of waste (SO9) and an amendment from the significantly positive impact previously stated to a minor positive. This has been reassessed due to parts of the site not having relevant planning / history.</i>												
SIE5	S / M	+	++	++	++	++	+	/	0	++	--	++	++	++
	L	+	++	++	++	++	+	/	0	++	--	/	++	++
Reason for rejection:		No new storage facilities have been deemed necessary to specifically allocate within the Plan. <i>The site has also been re-assessed since the Revised Preferred Approach (2015) stage as not being suitable in Highway Terms and/or not complying with Transport Policy.</i>												

Table 18: Appraisal of sites put forward for Enclosed Waste Facilities: Materials Recovery Facilities (MRF)

Sites for: MATERIALS RECOVERY FACILITIES (MRF)														
Site Ref.	Temp Effect	Sustainability Objectives (SO)												
		1	2	3	4	5	6	7	8	9	10	11	12	13
IWMF2	S / M	+	-	++	-	++	/	++	++	++	+	--	++	++
	L	+	-	++	-	++	/	++	++	++	+	/	++	++
Reason for rejection:		<p>Not specifically needed for use as MRF for waste generated within the Plan Area. Has been allocated in the Plan for another use.</p> <p>It should be noted that a change in a positive impact identified in the SA at the Revised Preferred Approach (2015) stage for IWMF2 – Rivenhall has been necessary at this stage regarding SO2 (water quality). This is due to a number of water bodies being within the existing adjacent operational quarry and the presence of a lake located north of the IWMF as part of the mineral restoration. The site will now have a negative impact on water quality as identified. In addition, a significant negative impact was highlighted for flooding due to the site being partly within FZ2 and FZ3; however it has been re-assessed that the vast majority of the site sits within FZ1 - a very small portion of the access track to the site goes over a waterway (River Blackwater) designated as both FZ2 and FZ3 however, a bridge over the waterway significantly reduces the risk of the access road flooding. The site has also re-assessed as having significant positive impacts on the historic environment (SO5) where the listed and ancillary buildings at Woodhouse Farm are to be archaeologically recorded and renovated under the present approved application.</p>												
IWMF3	S / M	+	++	--	++	++	/	++	0	++	+	-	++	++
	L	+	++	--	++	++	/	++	0	++	+	/	++	++
Safeguarded Site – Reason for safeguarding:		<p>The site scored highly against other sites considered for allocation in the Waste Site Assessment Report. It is also considered suitable to meet the capacity gap requirements and conforms to the general principles of the Spatial Strategy and the proximity principle. The site is operational as a MBT plant which incorporates MRF and is safeguarded due to providing sufficient capacity to recover materials from the residual waste fraction of LACW in the Plan Area.</p>												
L(i)10R	S / M	+	-	++	-	+	/	++	0	+	+	--	++	++
	L	+	-	++	-	+	/	++	0	+	+	/	++	++
Reason for rejection:		<p>Not needed for use as MRF. Has been allocated in the Plan for another use.</p>												
W1	S / M	+	-	++	++	+	++	/	0	++	--	/	--	++
	L	+	-	++	++	+	++	/	0	++	--	/	--	++
Reason for rejection		<p>The site is not considered to be suitable in Highway Terms and/or does not comply</p>												

		with Transport Policy.													
W3	S / M	+	-	/	++	+	++	++	0	++	+	-	++	++	
	L	+	-	/	++	+	++	++	0	++	+	/	++	++	
Reason for rejection:		<p>Not needed for use as a MRF. Has been allocated in the Plan for another use.</p> <p><i>An amendment to the impacts previously highlighted in the SA of the Revised Preferred Approach (2015) regarding health and well-being (SO11) on Site W3 (Basildon WWTW) has also been made. This is due to there being sensitive receptors within 250m of the site. As such the previously highlighted uncertain impacts are now judged to be negative. The site is also now recognised as being in FZ2 (previously erroneously judged to be in FZ1 for some uses) which sees an amendment to the impacts highlighted for flooding (SO3) as uncertain, where previously they were considered significantly positive.</i></p>													
W7	S / M	+	-	--	/	/	+	++	0	++	/	/	+	++	
	L	+	-	--	/	/	+	++	0	++	/	/	+	++	
Reason for rejection:		Not needed for use as a MRF. Has been allocated in the Plan for another use.													
W8	S / M	+	++	++	/	-	-	/	0	+	+	-	++	/	
	L	+	++	++	/	-	-	/	0	+	+	/	++	/	
Reason for rejection:		<p>Not needed for use as a MRF. Has been allocated in the Plan for another use.</p> <p><i>An amendment has been made since the SA of the Revised Preferred Approach (2015) regarding historic environment impacts at W8 - Elsenham. Uncertain impacts were previously highlighted for certain facility types due to moderate issues regarding the historic environment (SO5), however a re-assessment of the site has led to a major impact issue (which may be acceptable subject to mitigation) being highlighted for all facility types. As such impacts are now negative.</i></p>													
W15	S / M	/	-	++	/	++	-	/	0	-	/	-	+	/	
	L	/	-	++	/	++	-	/	0	-	/	/	+	/	
Reason for rejection:		<p>Not as sustainable, and did not score as highly as other sites considered for allocation in the Waste Site Assessment Report. In addition, there is an application for another incompatible use (housing) on the site which is pending.</p> <p><i>Since the Revised Preferred Approach (2015) stage, the impact highlighted in the SA for the sustainable management of waste (SO9) has needed amendment from significantly positive to negative. This is due to a current application for 190 dwellings on the site. In addition, previously highlighted uncertain impacts for landscape (SO6) have been amended to negative to reflect moderate to high adverse effects on St Osyth's park, the users of the B1027 and the caravan park.</i></p>													
W16	S / M	++	++	++	++	++	++	++	0	++	/	-	/	++	

	L	++	++	++	++	++	++	++	0	++	/	/	/	++
Reason for rejection:		Not needed for use as a MRF. The site is, and has been safeguarded within the Plan as, a Waste Transfer Station.												
W21	S / M	+	-	--	/	+	--	++	0	+	+	--	++	++
	L	+	-	--	/	+	--	++	0	+	+	/	++	++
Reason for rejection:		The site is within the Greenbelt.												
W31	S / M	+	++	++	/	/	/	/	0	++	+	-	++	++
	L	+	++	++	/	/	/	/	0	++	+	/	++	++
Reason for rejection:		Not needed for use as a MRF. Has been allocated in the Plan for another use. <i>An amendment since the Revised Preferred Approach (2015) stage SA regards the previous positive impact stated for the sustainable management of waste (SO9). This has been amended to a significant positive impacts associated with its positive waste use / permission history.</i>												
W32	S / M	/	-	--	-	/	-	/	0	+	+	/	++	+
	L	/	-	--	-	/	-	/	0	+	+	/	++	+
Reason for rejection:		Not needed for use as a MRF. Has been allocated in the Plan for another use. <i>W32 Crumps Farm will see an amendment from the Revised Preferred Approach (2015) SA. This responds to impacts regarding the sustainable management of waste (SO9) and an amendment from the significantly positive impact previously stated to a minor positive. This has been reassessed due to parts of the site not having relevant planning / history.</i>												
W35	S / M	+	++	++	++	+	/	/	0	++	--	-	--	+
	L	+	++	++	++	+	/	/	0	++	--	/	--	+
Reason for rejection		The site is not considered to be suitable in Highway Terms and/or does not comply with Transport Policy.												
SIE5	S / M	+	++	++	++	++	+	/	0	++	--	++	++	++
	L	+	++	++	++	++	+	/	0	++	--	/	++	++
Reason for rejection:		<i>The site has also been re-assessed since the Revised Preferred Approach (2015) stage as not being suitable in Highway Terms and/or not complying with Transport Policy.</i>												

Table 19: Appraisal of sites put forward for Enclosed Waste Facilities: Metal Recycling Facilities

Sites for: METAL RECYCLING FACILITIES														
Site Ref.	Temp Effect	Sustainability Objectives (SO)												
		1	2	3	4	5	6	7	8	9	10	11	12	13
W21	S / M	+	-	--	/	+	--	++	0	+	+	--	++	++
	L	+	-	--	/	+	--	++	0	+	+	/	++	++
Reason for rejection:		No new Metal Recycling Facilities have been deemed necessary to specifically allocate within the Plan. The site is also within the Greenbelt.												
W23	S / M	+	++	++	/	+	-	/	0	+	--	-	--	++
	L	+	++	++	/	+	-	/	0	+	--	/	--	++
Reason for rejection		No new Metal Recycling Facilities have been deemed necessary to specifically allocate within the Plan. Also, the site is not considered to be suitable in Highway Terms and/or does not comply with Transport Policy.												
SIE5	S / M	+	++	++	++	++	+	/	0	++	--	++	++	++
	L	+	++	++	++	++	+	/	0	++	--	/	++	++
Reason for rejection:		No new Metal Recycling Facilities have been deemed necessary to specifically allocate within the Plan. <i>The site has also been re-assessed since the Revised Preferred Approach (2015) stage as not being suitable in Highway Terms and/or not complying with Transport Policy.</i>												

Table 20: Appraisal of sites put forward for Enclosed Waste Facilities: In-vessel composting facilities

Sites for: IN-VESSEL COMPOSTING FACILITIES														
Site Ref.	Temp Effect	Sustainability Objectives (SO)												
		1	2	3	4	5	6	7	8	9	10	11	12	13
W3	S / M	+	-	/	++	+	++	++	0	++	+	-	++	++
	L	+	-	/	++	+	++	++	0	++	+	/	++	++
Preferred Site – Reason for allocation:		The site scored highly against other sites considered for allocation in the Waste Site Assessment Report. It is also considered suitable to meet the capacity gap requirements and its conformity to the general principles of the Spatial Strategy and the proximity principle. This site is preferred for its suitability for allocation for biological treatment, although the specific facility type has not been determined at this point.												

		<p><i>An amendment to the impacts previously highlighted in the SA of the Revised Preferred Approach (2015) regarding health and well-being (SO11) on Site W3 (Basildon WWTW) has also been made. This is due to there being sensitive receptors within 250m of the site. As such the previously highlighted uncertain impacts are now judged to be negative. The site is also now recognised as being in FZ2 (previously erroneously judged to be in FZ1 for some uses) which sees an amendment to the impacts highlighted for flooding (SO3) as uncertain, where previously they were considered significantly positive.</i></p>												
W7	S / M	+	-	--	/	/	+	++	0	++	/	/	+	++
	L	+	-	--	/	/	+	++	0	++	/	/	+	++
Preferred Site – Reason for allocation:		<p>Not allocated for use as biological treatment. Has been allocated in the Plan for another use.</p>												
W8	S / M	+	++	++	/	-	-	/	0	+	+	-	++	/
	L	+	++	++	/	-	-	/	0	+	+	/	++	/
Reason for rejection:		<p>Not allocated for use as biological treatment. Has been allocated in the Plan for another use.</p> <p><i>An amendment has been made since the SA of the Revised Preferred Approach (2015) regarding historic environment impacts at W8 - Elsenham. Uncertain impacts were previously highlighted for certain facility types due to moderate issues regarding the historic environment (SO5), however a re-assessment of the site has led to a major impact issue (which may be acceptable subject to mitigation) being highlighted for all facility types. As such impacts are now negative.</i></p>												
W20	S / M	+	-	++	/	++	+	++	0	++	+	-	+	++
	L	+	-	++	/	++	+	++	0	++	+	/	+	++
Preferred Site – Reason for allocation:		<p>The site scored highly against other sites considered for allocation in the Waste Site Assessment Report in consideration also of its suitability to meet the capacity gap requirements and its conformity to the general principles of the Spatial Strategy and the proximity principle. This site is preferred for its suitability for allocation for biological treatment, although the specific facility type has not been determined at this point.</p> <p><i>An amendment has also been necessary for the impact on water quality (SO2) previously stated on site W20 Courtauld Road. The alteration to the route of the Nevendon Brook now sees it run along the eastern boundary of the proposed site. As such previously significantly positive impacts are now negative due to the proximity of this water body.</i></p>												
W21	S / M	+	-	--	/	+	--	++	0	+	+	--	++	++
	L	+	-	--	/	+	--	++	0	+	+	/	++	++
Reason for rejection:		<p>The site is within the Greenbelt.</p>												

W30	S / M	-	-	--	/	+	--	/	0	++	+	-	++	++
	L	-	-	--	/	+	--	/	0	++	+	/	++	++
Reason for rejection:		The site is within the Greenbelt.												
W32	S / M	/	-	--	-	/	-	/	0	+	+	/	++	+
	L	/	-	--	-	/	-	/	0	+	+	/	++	+
Reason for rejection:		Not allocated for use as biological treatment. Has been allocated in the Plan for another use. <i>W32 Crumps Farm will see an amendment from the Revised Preferred Approach (2015) SA. This responds to impacts regarding the sustainable management of waste (SO9) and an amendment from the significantly positive impact previously stated to a minor positive. This has been reassessed due to parts of the site not having relevant planning / history.</i>												
SIE5	S / M	+	++	++	++	++	+	/	0	++	--	++	++	++
	L	+	++	++	++	++	+	/	0	++	--	/	++	++
Reason for rejection:		<i>At the Revised Preferred Approach (2015) stage, the site was deemed to have scored highly against other sites considered for allocation in the Waste Site Assessment Report in consideration also of its suitability to meet the capacity gap requirements and its conformity to the general principles of the Spatial Strategy and the proximity principle. This site was, as a result, a preferred allocation for its suitability for allocation for biological treatment. Since then, the site has been considered to not be suitable in Highway Terms and/or does not comply with Transport Policy. This is due to Grange Road being of an insufficient width to allow two HGVs to pass satisfactorily.</i>												

Table 21: Appraisal of sites put forward for Enclosed Waste Facilities: Mechanical Biological Treatment Facilities (MBT)

Sites for: MECHANICAL BIOLOGICAL TREATMENT FACILITIES (MBT)														
Site Ref.	Temp Effect	Sustainability Objectives (SO)												
		1	2	3	4	5	6	7	8	9	10	11	12	13
IWMF2	S / M	+	-	++	-	++	/	++	++	++	+	--	++	++
	L	+	-	++	-	++	/	++	++	++	+	/	++	++
Reason for rejection:		Given the IWMF at Tovi Eco Park (Basildon) is safeguarded, it has not been deemed necessary to allocate any new MBT within the Plan Area. The site is however allocated for other uses. <i>It should be noted that a change in a positive impact identified in the SA at the Revised Preferred Approach (2015) stage for IWMF2 – Rivenhall has been necessary at this stage regarding SO2 (water quality). This is due to a number of water bodies being within the existing adjacent operational quarry and the presence of a lake located north of the IWMF as part of the</i>												

		<p><i>mineral restoration. The site will now have a negative impact on water quality as identified. In addition, a significant negative impact was highlighted for flooding due to the site being partly within FZ2 and FZ3; however it has been re-assessed that the vast majority of the site sits within FZ1 - a very small portion of the access track to the site goes over a waterway (River Blackwater) designated as both FZ2 and FZ3 however, a bridge over the waterway significantly reduces the risk of the access road flooding. The site has also re-assessed as having significant positive impacts on the historic environment (SO5) where the listed and ancillary buildings at Woodhouse Farm are to be archaeologically recorded and renovated under the present approved application.</i></p>												
IWMF3	S / M	+	++	--	++	++	/	++	0	++	+	-	++	++
	L	+	++	--	++	++	/	++	0	++	+	/	++	++
Safeguarded Site – Reason for safeguarding:		<p>The site scored highly against other sites considered for allocation in the Waste Site Assessment Report. It is also considered suitable to meet the capacity gap requirements and conforms to the general principles of the Spatial Strategy and the proximity principle. There is no identified capacity requirement for MBT beyond the operation of this site. This facility, coupled with its associated network of supporting waste transfer sites, provides sufficient capacity to recover materials from the residual waste fraction of LACW in the Plan Area. As a result of this, the site is safeguarded.</p>												
W1	S / M	+	-	++	++	+	++	/	0	++	--	/	--	++
	L	+	-	++	++	+	++	/	0	++	--	/	--	++
Reason for rejection:		<p>The site is not considered to be suitable in Highway Terms and/or does not comply with Transport Policy.</p>												
W7	S / M	+	-	--	/	/	+	++	0	++	/	/	+	++
	L	+	-	--	/	/	+	++	0	++	/	/	+	++
Reason for rejection:		<p>Given the IWMF at Tovi Eco Park (Basildon) is safeguarded, it has not been deemed necessary to allocate any new MBT within the Plan Area. The site is however allocated for another use.</p>												
W8	S / M	+	++	++	/	-	-	/	0	+	+	-	++	/
	L	+	++	++	/	-	-	/	0	+	+	/	++	/
Reason for rejection:		<p>Not allocated for use as MBT. Has been allocated in the Plan for another use.</p> <p><i>An amendment has been made since the SA of the Revised Preferred Approach (2015) regarding historic environment impacts at W8 - Elsenham. Uncertain impacts were previously highlighted for certain facility types due to moderate issues regarding the historic environment (SO5), however a re-assessment of the site has led to a major impact issue (which may be acceptable subject to mitigation) being highlighted for all facility types. As such impacts are now negative.</i></p>												
W29	S / M	/	-	++	++	+	+	/	0	+	+	--	++	++

	L	/	-	++	++	+	+	/	0	+	+	/	++	++
Reason for rejection:		Given the IWMF at Tovi Eco Park (Basildon) is safeguarded, it has not been deemed necessary to allocate any new MBT within the Plan Area. The site is however allocated for another use.												
W32	S / M	/	-	--	-	/	-	/	0	+	+	/	++	+
	L	/	-	--	-	/	-	/	0	+	+	/	++	+
Reason for rejection:		Not allocated for use as MBT. Has been allocated in the Plan for another use <i>W32 Crumps Farm will see an amendment from the Revised Preferred Approach (2015) SA. This responds to impacts regarding the sustainable management of waste (SO9) and an amendment from the significantly positive impact previously stated to a minor positive. This has been reassessed due to parts of the site not having relevant planning / history.</i>												
SIE5	S / M	+	++	++	++	++	+	/	0	++	--	++	++	++
	L	+	++	++	++	++	+	/	0	++	--	/	++	++
Reason for rejection:		<i>The site has also been re-assessed since the Revised Preferred Approach (2015) stage as not being suitable in Highway Terms and/or not complying with Transport Policy.</i>												

7.7 The Appraisal of Enclosed Thermal Facilities

Enclosed Thermal waste facilities are generally those housed in buildings with flues and digestate piping, although this is not always the case for some facilities that although include some level of heating in the treatment of waste, transport the products of this off site. The broad category of waste facility types described as enclosed thermal for the purposes of this section, are listed below. The facility types are:

- Combined Heat & Power facilities
- Gasification and Pyrolysis facilities
- Anaerobic Digesters / Biogas facilities
- Autoclaving facilities

Please note that numerous sites were put forward for multiple facility types, and these have been appraised on a facility type basis. As such, it may appear that preferred sites for one facility type are not preferred (i.e. rejected) for other facility types proposed by the site owner / developer.

It should be noted that since the Revised Preferred Approach [2015] stage, the site owner / developer of site W13 (Wivenhoe Quarry Plant Area, Colchester) has specified that Anaerobic Digestion/Biogas is no longer to be promoted on the site. This was a preferred site at the Revised Preferred Approach (2015) stage for Biological Treatment.

Sites highlighted in grey represent those sites for which the status has changed or an amendment in the highlighted impacts has been made following re-assessment since the revised Preferred Approach (2015).

Table 22: Appraisal of sites put forward for Enclosed Thermal Facilities: Combined Heat and Power Facilities (CHP)

Sites for: COMBINED HEAT AND POWER FACILITIES (CHP)														
Site Ref.	Temp Effect	Sustainability Objectives (SO)												
		1	2	3	4	5	6	7	8	9	10	11	12	13
IWMF2	S / M	+	-	++	-	++	-	++	++	++	+	--	++	/
	L	+	-	++	-	++	-	++	++	++	+	/	++	/
Allocated Site – Reason for allocation:		<p>At present, the Waste Disposal Authority is exploring long term options surrounding the final destination for the stabilised residual waste output of the Tovi Eco Park Facility. Currently the 200,000t output of the facility is exported from the Plan Area. A competitive tender process will identify the long-term management solution for this waste, which includes continued exportation from the Plan Area. However, in line with net self-sufficiency, the Plan includes IWMF2 as a site allocation for 'other waste management' which could accommodate this waste.</p> <p><i>It should be noted that a change in a positive impact identified in the SA at the Revised Preferred Approach (2015) stage for IWMF2 – Rivenhall has been necessary at this stage regarding SO2 (water quality). This is due to a number of water bodies being within the existing adjacent operational quarry and the presence of a lake located north of the IWMF as part of the mineral restoration. The site will now have a negative impact on water quality as identified. In addition, a significant negative impact was highlighted for flooding due to the site being partly within FZ2 and FZ3;</i></p>												

		<i>however it has been re-assessed that the vast majority of the site sits within FZ1 - a very small portion of the access track to the site goes over a waterway (River Blackwater) designated as both FZ2 and FZ3 however, a bridge over the waterway significantly reduces the risk of the access road flooding. The site has also re-assessed as having significant positive impacts on the historic environment (SO5) where the listed and ancillary buildings at Woodhouse Farm are to be archaeologically recorded and renovated under the present approved application.</i>													
W3	S / M	/	-	/	/	+	/	++	/	++	+	-	++	++	
	L	/	-	/	/	+	/	++	/	++	+	/	++	++	
Reason for rejection:		<p>While close to the source of waste W3 Basildon is considered to be too small a site to accommodate a facility of the nature needed to meet this specific need. The site is however allocated for another use.</p> <p><i>An amendment to the impacts previously highlighted in the SA of the Revised Preferred Approach (2015) regarding health and well-being (SO11) on Site W3 (Basildon WWTW) has also been made. This is due to there being sensitive receptors within 250m of the site. As such the previously highlighted uncertain impacts are now judged to be negative. The site is also now recognised as being in FZ2 (previously erroneously judged to be in FZ1 for some uses) which sees an amendment to the impacts highlighted for flooding (SO3) as uncertain, where previously they were considered significantly positive. There will also now be uncertain impacts on landscape (SO6) for enclosed-thermal and open-air facilities as well as uncertain impacts on biodiversity due to the site being within 10km of internationally designated sites.</i></p>													
W7	S / M	/	-	--	/	/	-	++	/	++	/	-	+	++	
	L	/	-	--	/	/	-	++	/	++	/	/	+	++	
Reason for rejection:		<p>Not as sustainable, and did not score as highly as other sites considered for allocation for CHP. The site is however allocated for another use.</p>													
W8	S / M	/	++	++	/	-	-	/	/	+	+	-	++	/	
	L	/	++	++	/	-	-	/	/	+	+	/	++	/	
Reason for rejection:		<p>Not as sustainable, and did not score as highly as other sites considered for allocation for AD. The site is however allocated for another use.</p> <p><i>An amendment has been made since the SA of the Revised Preferred Approach (2015) regarding historic environment impacts at W8 - Elsenham. Uncertain impacts were previously highlighted for certain facility types due to moderate issues regarding the historic environment (SO5), however a re-assessment of the site has led to a major impact issue (which may be acceptable subject to mitigation) being highlighted for all facility types. As such impacts are now negative.</i></p>													
W27	S / M	/	++	++	/	/	--	++	/	+	+	-	++	++	
	L	/	++	++	/	/	--	++	/	+	+	/	++	++	

Reason for rejection:		Not as sustainable, and did not score as highly as other sites considered for allocation for AD.												
W31	S / M	/	++	++	/	/	-	/	/	++	+	-	++	++
	L	/	++	++	/	/	-	/	/	++	+	/	++	++
Reason for rejection:		<p>It is noted in the commentary for W31 in the Site Assessment Report that should an Energy from Waste facility include flues it would have significant negative impacts (requiring an amendment to a red score using the methodology of that assessment) given the high number of residential neighbours within 250m of the site. For this reason, the site was rejected for use as CHP. The site is however allocated for another use.</p> <p><i>An amendment since the Revised Preferred Approach (2015) stage SA regards the previous positive impact stated for the sustainable management of waste (SO9). This has been amended to a significant positive impacts associated with its positive waste use / permission history.</i></p>												

Table 23: Appraisal of sites put forward for Enclosed Thermal Facilities: Gasification and Pyrolysis Facilities

Sites for: GASIFICATION AND PYROLYSIS FACILITIES														
Site Ref.	Temp Effect	Sustainability Objectives (SO)												
		1	2	3	4	5	6	7	8	9	10	11	12	13
W7	S / M	/	-	--	/	/	-	++	/	++	/	-	+	++
	L	/	-	--	/	/	-	++	/	++	/	/	+	++
Reason for rejection:		No new gasification and pyrolysis facilities have been deemed necessary to specifically allocate within the Plan. The site is however allocated for another use.												
W8	S / M	/	++	++	/	-	-	/	/	+	+	-	++	/
	L	/	++	++	/	-	-	/	/	+	+	/	++	/
Reason for rejection:		<p>No new gasification and pyrolysis facilities have been deemed necessary to specifically allocate within the Plan. The site is however allocated for another use.</p> <p><i>An amendment has been made since the SA of the Revised Preferred Approach (2015) regarding historic environment impacts at W8 - Elsenham. Uncertain impacts were previously highlighted for certain facility types due to moderate issues regarding the historic environment (SO5), however a re-assessment of the site has led to a major impact issue (which may be acceptable subject to mitigation) being highlighted for all facility types. As such impacts are now negative.</i></p>												
W31	S / M	/	++	++	/	/	-	/	/	++	+	-	++	++
	L	/	++	++	/	/	-	/	/	++	+	/	++	++
Reason for		No new gasification and pyrolysis facilities have been deemed necessary to												

rejection:	<p>specifically allocate within the Plan. The site is however allocated for another use.</p> <p><i>An amendment since the Revised Preferred Approach (2015) stage SA regards the previous positive impact stated for the sustainable management of waste (SO9). This has been amended to a significant positive impacts associated with its positive waste use / permission history.</i></p>
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Table 24: Appraisal of sites put forward for Enclosed Thermal Facilities: Anaerobic Digestion / Biogas (AD)

Sites for: ANAEROBIC DIGESTION (AD) / BIOGAS														
Site Ref.	Temp Effect	Sustainability Objectives (SO)												
		1	2	3	4	5	6	7	8	9	10	11	12	13
IWMF2	S / M	+	-	++	-	++	-	++	++	++	+	--	++	/
	L	+	-	++	-	++	-	++	++	++	+	/	++	/
Allocated Site – Reason for allocation:		<p>The site scored highly against other sites considered for allocation in the Waste Site Assessment Report. It is also considered suitable to meet the capacity gap requirements and its conformity to the general principles of the Spatial Strategy. The site has been allocated for Biological Treatment and it could be developed as AD if required in the Plan period.</p> <p><i>It should be noted that a change in a positive impact identified in the SA at the Revised Preferred Approach (2015) stage for IWMF2 – Rivenhall has been necessary at this stage regarding SO2 (water quality). This is due to a number of water bodies being within the existing adjacent operational quarry and the presence of a lake located north of the IWMF as part of the mineral restoration. The site will now have a negative impact on water quality as identified. In addition, a significant negative impact was highlighted for flooding due to the site being partly within FZ2 and FZ3; however it has been re-assessed that the vast majority of the site sits within FZ1 - a very small portion of the access track to the site goes over a waterway (River Blackwater) designated as both FZ2 and FZ3 however, a bridge over the waterway significantly reduces the risk of the access road flooding. The site has also re-assessed as having significant positive impacts on the historic environment (SO5) where the listed and ancillary buildings at Woodhouse Farm are to be archaeologically recorded and renovated under the present approved application.</i></p>												
W1	S / M	+	-	++	-	+	--	/	/	++	--	/	--	++
	L	+	-	++	-	+	--	/	/	++	--	/	--	++
Reason for rejection		The site is not considered to be suitable in Highway Terms and/or does not comply with Transport Policy.												
W3	S / M	/	-	/	/	+	/	++	/	++	+	-	++	++
	L	/	-	/	/	+	/	++	/	++	+	/	++	++
Allocated Site –		The site scored highly against other sites considered for allocation in the Waste Site												

Reason for allocation:		<p>Assessment Report. It is also considered suitable to meet the capacity gap requirements and conforms to the general principles of the Spatial Strategy and the proximity principle. This site is preferred for its suitability for allocation for biological treatment, although the specific facility type has not been determined at this point.</p> <p><i>An amendment to the impacts previously highlighted in the SA of the Revised Preferred Approach (2015) regarding health and well-being (SO11) on Site W3 (Basildon WWTW) has also been made. This is due to there being sensitive receptors within 250m of the site. As such the previously highlighted uncertain impacts are now judged to be negative. The site is also now recognised as being in FZ2 (previously erroneously judged to be in FZ1 for some uses) which sees an amendment to the impacts highlighted for flooding (SO3) as uncertain, where previously they were considered significantly positive. There will also now be uncertain impacts on landscape (SO6) for enclosed-thermal and open-air facilities as well as uncertain impacts on biodiversity due to the site being within 10km of internationally designated sites.</i></p>													
W7	S / M	/	-	--	/	/	-	++	/	++	/	-	+	++	
	L	/	-	--	/	/	-	++	/	++	/	/	+	++	
Reason for rejection:		<p>Not as sustainable, and did not score as highly as other sites considered for allocation for AD. Has been allocated in the Plan for another use.</p>													
W8	S / M	/	++	++	/	-	-	/	/	+	+	-	++	/	
	L	/	++	++	/	-	-	/	/	+	+	/	++	/	
Reason for rejection:		<p>Not as sustainable, and did not score as highly as other sites considered for allocation for AD. Has been allocated in the Plan for another use.</p> <p><i>An amendment has been made since the SA of the Revised Preferred Approach (2015) regarding historic environment impacts at W8 - Elsenham. Uncertain impacts were previously highlighted for certain facility types due to moderate issues regarding the historic environment (SO5), however a re-assessment of the site has led to a major impact issue (which may be acceptable subject to mitigation) being highlighted for all facility types. As such impacts are now negative.</i></p>													
W13	S / M	/	-	++	-	++	/	/	/	++	/	--	+	++	
	L	/	-	++	-	++	/	/	/	++	/	/	+	++	
Reason for rejection:		<p>The site scored relatively well against other sites considered for allocation in the Waste Site Assessment Report. It was considered suitable to meet the capacity gap requirements and conforms to the general principles of the Spatial Strategy and the proximity principle. As such, this site was a preferred site at the Revised Preferred Approach (2015) stage.</p> <p><i>Since the Revised Preferred Approach (2015) stage, the site owner / developer has specified that Treatment – Anaerobic Digestion/Biogas is no longer promoted for consideration on the site.</i></p>													
W17	S / M	/	-	++	++	+	+	++	/	++	--	--	--	++	

	L	/	-	++	++	+	+	++	/	++	--	/	--	++
Reason for rejection		The site is not considered to be suitable in Highway Terms and/or does not comply with Transport Policy.												
W20	S / M	/	-	++	/	++	/	++	/	++	+	-	+	++
	L	/	-	++	/	++	/	++	/	++	+	/	+	++
Allocated Site – Reason for allocation:		<p>The site scored highly against other sites considered for allocation in the Waste Site Assessment Report. It is also considered suitable to meet the capacity gap requirements and conforms to the general principles of the Spatial Strategy and the proximity principle. This site is preferred for its suitability for allocation for biological treatment, although the specific facility type has not been determined at this point.</p> <p><i>An amendment has also been necessary for the impact on water quality (SO2) previously stated on site W20 Courtauld Road. The alteration to the route of the Nevendon Brook now sees it run along the eastern boundary of the proposed site. As such previously significantly positive impacts are now negative due to the proximity of this water body. There will also now be an uncertain impact on landscape (SO6), and amendment to the previously stated positive impact, due to a re-assessment of the site for enclosed thermal facilities. This is also the case for biodiversity (SO1) due to a re-assessment of the site for enclosed thermal facilities due to the proximity of internationally designated sites.</i></p>												
W21	S / M	/	-	--	/	+	--	++	/	+	+	--	++	++
	L	/	-	--	/	+	--	++	/	+	+	/	++	++
Reason for rejection:		The site is within the Greenbelt.												
W29	S / M	/	-	++	++	/	-	/	/	+	+	--	++	++
	L	/	-	++	++	/	-	/	/	+	+	/	++	++
Allocated Site – Reason for allocation:		The site scored highly against other sites considered for allocation in the Waste Site Assessment Report. It is also considered suitable to meet the capacity gap requirements and conforms to the general principles of the Spatial Strategy and the proximity principle. This site is preferred for its suitability for allocation for biological treatment, although the specific facility type has not been determined at this point.												
W31	S / M	/	++	++	/	/	-	/	/	++	+	-	++	++
	L	/	++	++	/	/	-	/	/	++	+	/	++	++
Reason for rejection:		<p>Not as sustainable, and did not score as highly as other sites considered for allocation for AD. Has been allocated in the Plan for another use.</p> <p><i>An amendment since the Revised Preferred Approach (2015) stage SA regards the previous positive impact stated for the sustainable management of waste (SO9). This has been amended to a significant positive impacts associated with its positive waste use / permission history.</i></p>												
W32	S / M	/	-	--	-	/	-	/	/	+	+	/	++	+

	L	/	-	--	-	/	-	/	/	+	+	/	++	+
Reason for rejection:	<p>Not as sustainable, and did not score as highly as other sites considered for allocation for AD. Has been allocated in the Plan for another use.</p> <p><i>W32 Crumps Farm will see an amendment from the Revised Preferred Approach (2015) SA. This responds to impacts regarding the sustainable management of waste (SO9) and an amendment from the significantly positive impact previously stated to a minor positive. This has been reassessed due to parts of the site not having relevant planning / history.</i></p>													
SIE5	S / M	/	++	++	++	++	+	/	/	++	--	++	++	++
	L	/	++	++	++	++	+	/	/	++	--	/	++	++
Reason for rejection:	<p><i>At the Revised Preferred Approach (2015) stage, the site was deemed to have scored highly against other sites considered for allocation in the Waste Site Assessment Report. It was also considered suitable to meet the capacity gap requirements and conformed to the general principles of the Spatial Strategy and the proximity principle. This site was, as a result, a preferred allocation for its suitability for allocation for biological treatment. Since then, the site has been considered to not be suitable in Highway Terms and/or does not comply with Transport Policy. This is due to Grange Road being of an insufficient width to allow two HGVs to pass satisfactorily.</i></p>													

Table 25: Appraisal of sites put forward for Enclosed Thermal Facilities: Autoclaving Facilities

Sites for: AUTOCLAVING FACILITIES														
Site Ref.	Temp Effect	Sustainability Objectives (SO)												
		1	2	3	4	5	6	7	8	9	10	11	12	13
W1	S / M	+	-	++	++	+	--	/	/	++	--	/	--	++
	L	+	-	++	++	+	--	/	/	++	--	/	--	++
Reason for rejection	<p>No new autoclaving facilities have been deemed necessary to specifically allocate within the Plan. Also, the site is not considered to be suitable in Highway Terms and/or does not comply with Transport Policy.</p>													
W7	S / M	/	-	--	/	/	-	++	/	++	/	-	+	++
	L	/	-	--	/	/	-	++	/	++	/	/	+	++
Reason for rejection:	<p>No new autoclaving facilities have been deemed necessary to specifically allocate within the Plan. The site is however allocated for another use.</p>													
W8	S / M	/	++	++	/	-	-	/	/	+	+	-	++	/
	L	/	++	++	/	-	-	/	/	+	+	/	++	/
Reason for rejection:	<p>No new autoclaving facilities have been deemed necessary to specifically allocate within the Plan. The site is however allocated for another use.</p>													

		<p><i>An amendment has been made since the SA of the Revised Preferred Approach (2015) regarding historic environment impacts at W8 - Elsenham. Uncertain impacts were previously highlighted for certain facility types due to moderate issues regarding the historic environment (SO5), however a re-assessment of the site has led to a major impact issue (which may be acceptable subject to mitigation) being highlighted for all facility types. As such impacts are now negative.</i></p>													
W29	S / M	/	-	++	++	/	-	/	/	+	+	--	++	++	
	L	/	-	++	++	/	-	/	/	+	+	/	++	++	
Reason for rejection:		<p>No new autoclaving facilities have been deemed necessary to specifically allocate within the Plan. The site is however allocated for another use.</p>													
W31	S / M	/	++	++	/	/	-	/	/	++	+	-	++	++	
	L	/	++	++	/	/	-	/	/	++	+	/	++	++	
Reason for rejection:		<p>No new autoclaving facilities have been deemed necessary to specifically allocate within the Plan. The site is however allocated for another use.</p> <p><i>An amendment since the Revised Preferred Approach (2015) stage SA regards the previous positive impact stated for the sustainable management of waste (SO9). This has been amended to a significant positive impacts associated with its positive waste use / permission history.</i></p>													
SIE5	S / M	/	++	++	++	++	+	/	/	++	--	++	++	++	
	L	/	++	++	++	++	+	/	/	++	--	/	++	++	
Reason for rejection:		<p>No new autoclaving facilities have been deemed necessary to specifically allocate within the Plan.</p> <p><i>Since the Revised Preferred Approach (2015) stage, the site has been considered to not be suitable in Highway Terms and/or does not comply with Transport Policy. This is due to Grange Road being of an insufficient width to allow two HGVs to pass satisfactorily.</i></p>													

7.8 The Appraisal of Open Air Facilities

Open air waste facilities are those that are not housed in buildings. The broad category of waste facility types described as open air for the purposes of this section, are listed below. The facility types are:

- Construction, Demolition and Excavation Waste Recycling facilities (or inert recycling)
- End of Life Vehicle Recycling facilities
- (Open) Windrow Composting facilities
- Waste Water Treatment Works
- Inert Landfill Sites
- Non-inert Landfill Sites
- Non-Hazardous Landfill Sites
- Hazardous Landfill Sites

Sites highlighted in grey represent those sites for which the status has changed or an amendment in the highlighted impacts has been made following re-assessment since the Revised Preferred Approach (2015).

Table 26: Appraisal of sites put forward for Open Air Facilities: Construction, Demolition and Excavation Waste (CD&EW) Recycling Facilities (or inert recycling/soil screening and non-inert recycling)

Sites for: CONSTRUCTION, DEMOLITION AND EXCAVATION (CD&EW) RECYCLING FACILITIES (OR INERT AND NON-INERT RECYCLING)														
Site Ref.	Temp Effect	Sustainability Objectives (SO)												
		1	2	3	4	5	6	7	8	9	10	11	12	13
L(i)4R	S / M	/	-	++	++	/	--	/	0	++	/	--	/	++
	L	/	-	++	++	/	--	/	0	++	/	/	/	++
Reason for rejection		The site is within the Green Belt.												
L(i)7	S / M	/	-	++	++	/	++	/	0	++	+	--	++	++
	L	/	-	++	++	/	++	/	0	++	+	/	++	++
Safeguarded site – Reason for safeguarding:		The granting of planning permission for this activity means that this site must now be considered to contribute towards the total waste capacity in the Plan Area. Allocation of the site to support this activity is therefore unnecessary.												
L(i)10R	S / M	+	-	++	++	+	/	++	0	+	+	--	++	++
	L	+	-	++	++	+	/	++	0	+	+	/	++	++
Allocated Site – Reason for allocation:		The site scored highly against other sites considered for allocation in the Waste Site Assessment Report. It is also considered suitable to meet the capacity gap requirements and conforms to the general principles of the Spatial Strategy and the proximity principle.												
L(i)17R	S / M	/	-	++	-	+	++	++	0	+	/	-	+	+

	L	/	-	++	-	+	++	++	0	+	/	-	+	+
Allocated Site – Reason for allocation		<p><i>Site L(i)17R Newport Quarry was put forward during the Revised Preferred Approach (2015) consultation. The site scored highly against other sites considered for allocation in the Waste Site Assessment Report and was identified as being able to meet inert landfill and recycling needs particularly in the west of the County. For these reasons the site has been allocated for both inert recycling and inert landfill.</i></p>												
L(n)1R	S / M	+	-	++	++	/	/	++	0	+	/	-	+	++
	L	+	-	++	++	/	/	++	0	+	/	/	+	++
Allocated Site – Reason for allocation:		<p>The site scored highly against other sites considered for allocation in the Waste Site Assessment Report. It is also considered suitable to meet the capacity gap requirements and conforms to the general principles of the Spatial Strategy and the proximity principle.</p>												
L(n)6R	S / M	-	-	--	++	+	--	/	0	++	+	-	++	++
	L	-	-	--	++	+	--	/	0	++	+	/	++	++
Reason for rejection		<p>The site is within the Green Belt.</p>												
L(n)7R	S / M	/	-	--	++	/	/	/	0	+	+	/	++	+
	L	/	-	--	++	/	/	/	0	+	+	/	++	+
Reason for rejection:		<p>The WPAs do not consider that this site would be capable of operating independently for this specific use with other sites at Crumps Farm / Little Bullocks Farm having been allocated. The site however has been allocated for another use.</p> <p><i>There is an amendment from the SA of the Revised Preferred Approach (2015) regarding an erroneous impact on the sustainable management of waste (SO9) at site L(n)7R – Little Bullocks Farm Site A22. This is due to the site being Greenfield land with no planning history within the specific red-line boundary of the site. As such, the significant positive impact highlighted at the Revised Preferred Approach (2015) stage SA has been amended to be a minor positive impact. In addition, the site was also previously erroneously judged to have significant positive impacts on flooding (SO3) for certain uses / facilities, however a small amount of the site is within FZ3. As such the site will now have significantly negative impacts on this objective. A re-assessment of the site now also indicates that there will moderate impacts on landscape which will give rise to an uncertain impact on SO6; an amendment of a significantly positive score highlighted in the SA at the Revised Preferred Approach (2015) stage.</i></p>												
L(n)8R	S / M	/	-	++	++	+	-	/	0	+	+	--	++	/
	L	/	-	++	++	+	-	/	0	+	+	/	++	/
Reason for rejection:		<p>The WPAs do not consider that this site would be capable of operating independently for this specific use with other sites at Crumps Farm / Little Bullocks Farm having been allocated. The site has however been allocated in the</p>												

		Plan for another use.												
		<p><i>There is an amendment from the SA of the Revised Preferred Approach (2015) regarding an erroneous impact on the sustainable management of waste (SO9) at site L(n)8R. This is due to the site being Greenfield land with no planning history within the specific red-line boundary of the site. As such, the significant positive impact highlighted at the Revised Preferred Approach (2015) stage SA has been amended to be a minor positive impact. A re-assessment of the site now also indicates that there will moderate to major effects on landscape which will give rise to an negative impact on SO6; an amendment of an uncertain score highlighted in the SA at the Revised Preferred Approach (2015) stage.</i></p>												
W1	S / M	+	-	++	++	+	/	/	0	++	--	/	--	++
	L	+	-	++	++	+	/	/	0	++	--	/	--	++
Reason for rejection		The site is not considered to be suitable in Highway Terms and/or does not comply with Transport Policy.												
W3	S / M	+	-	/	++	+	/	++	0	++	+	-	++	++
	L	+	-	/	++	+	/	++	0	++	+	/	++	++
Reason for rejection:		<p>The WPAs have decided to prioritise meeting the forecasted biological recovery capacity need over the recycling of inert waste. This approach will reduce the amount of biological waste going to landfill. Sending biological waste to landfill, rather than inert waste, is considered to have greater environmental impacts, given the potential for such waste to generate bio-aerosols and greenhouse gases. As a result, this site has not been allocated for inert recycling and has been allocated in the Plan for biological treatment.</p> <p><i>An amendment to the impacts previously highlighted in the SA of the Revised Preferred Approach (2015) regarding health and well-being (SO11) on Site W3 (Basildon WWTW) has also been made. This is due to there being sensitive receptors within 250m of the site. As such the previously highlighted uncertain impacts are now judged to be negative. The site is also now recognised as being in FZ2 (previously erroneously judged to be in FZ1 for some uses) which sees an amendment to the impacts highlighted for flooding (SO3) as uncertain, where previously they were considered significantly positive.</i></p>												
W7	S / M	+	-	--	/	+	+	++	0	++	/	/	+	++
	L	+	-	--	/	+	+	++	0	++	/	/	+	++
Allocated Site – Reason for allocation:		<p>The site scored relatively highly against other sites considered for allocation in the Waste Site Assessment Report. It is also considered suitable to meet the capacity gap requirements and conforms to the general principles of the Spatial Strategy and the proximity principle.</p> <p><i>The WPAs have decided to prioritise meeting the forecasted biological recovery capacity need over the recycling of inert waste. This approach will reduce the amount of biological waste going to landfill. Sending biological waste to landfill, rather than inert waste, is considered to have</i></p>												

		<p><i>greater environmental impacts, given the potential for such waste to generate bio-aerosols and greenhouse gases. As a result, this site was a preferred site for biological treatment at the Revised Preferred Approach (2015) stage. It scored highly against other sites considered for allocation in the Waste Site Assessment Report, was also considered suitable to meet the capacity gap requirements and conformed to the general principles of the Spatial Strategy and the proximity principle.</i></p> <p><i>Since the Revised Preferred Approach (2015) stage, it has been determined that the previous five preferred sites for biological treatment can deliver a total of 259,000tpa which is over and above the 217,000tpa needed. As the site W7 Sandon East scored significantly lower than the other four sites and those four sites on their own would provide sufficient capacity it has been discounted for biological waste treatment. The site has instead been allocated for inert recycling.</i></p>												
W8	S / M	+	++	++	/	-	-	/	0	+	+	-	++	/
	L	+	++	++	/	-	-	/	0	+	+	/	++	/
Allocated Site – Reason for allocation:		<p>The site scored highly against other sites considered for allocation in the Waste Site Assessment Report. It is also considered suitable to meet the capacity gap requirements and conforms to the general principles of the Spatial Strategy and the proximity principle.</p> <p><i>An amendment has been made since the SA of the Revised Preferred Approach (2015) regarding historic environment impacts at W8 - Elsenham. Uncertain impacts were previously highlighted for certain facility types due to moderate issues regarding the historic environment (SO5), however a re-assessment of the site has led to a major impact issue (which may be acceptable subject to mitigation) being highlighted for all facility types. As such impacts are now negative.</i></p>												
W13	S / M	/	-	++	++	++	++	/	0	++	/	--	+	++
	L	/	-	++	++	++	++	/	0	++	/	/	+	++
Allocated Site – Reason for allocation:		<p><i>At the Revised Preferred Approach (2015) stage, this site was not allocated for inert recycling as its preferred use was for biological treatment. This was due to the WPAs having decided to prioritise meeting the forecasted biological recovery capacity need over the recycling of inert waste in order to reduce the amount of biological waste going to landfill.</i></p> <p><i>It should be noted that since the Revised Preferred Approach (2015) stage, the site owner / developer of site W13 (Wivenhoe Quarry Plant Area, Colchester) has specified that Anaerobic Digestion/Biogas is no longer to be promoted on the site. As the site also scored highly against other sites considered for inert recycling allocation in the Waste Site Assessment Report and due to its suitability in meeting the capacity gap requirements and conformity to the general principles of the Spatial Strategy and the proximity principle, the site has now been selected for inert recycling.</i></p>												
W14	S / M	/	-	++	++	++	++	/	0	++	--	-	--	++
	L	/	-	++	++	++	++	/	0	++	--	/	--	++

Reason for rejection		The site is not considered to be suitable in Highway Terms and/or does not comply with Transport Policy.												
W15	S / M	-	-	++	/	+	-	/	0	++	/	-	+	/
	L	-	-	++	/	+	-	/	0	++	/	/	+	/
Reason for rejection:		<p>Not as sustainable, and did not score as highly as other sites considered for allocation in the Waste Site Assessment Report. In addition, there is an application for another incompatible use (housing) on the site which is pending.</p> <p><i>Since the Revised Preferred Approach (2015) stage, the impact highlighted in the SA for landscape (SO6) has needed amendment from significantly negative to minor negative. This is due to a re-assessment of the site.</i></p>												
W18	S / M	/	++	++	++	+	/	/	0	++	--	-	--	++
	L	/	++	++	++	+	/	/	0	++	--	/	--	++
Reason for rejection		The site is not considered to be suitable in Highway Terms and/or does not comply with Transport Policy.												
W19	S / M	+	++	++	-	++	--	++	0	+	+	-	++	++
	L	+	++	++	-	++	--	++	0	+	+	/	++	++
Reason for rejection		<p><i>At the Revised Preferred Approach (2015) stage the Council initially allocated this site, despite it failing the Stage 2 sieving criterion of being located within the Green Belt. Despite being located in the Green Belt, W19 was at that stage deemed to have fewer other negative impacts than the sites for inert recycling that passed Stage 2. At this Pre-Submission stage however, the decision to allocate has been reversed which is consistent with other sites that also failed at Stage 2 due to being located within the Green Belt.</i></p>												
W21	S / M	+	-	--	/	+	--	++	0	+	+	--	++	++
	L	+	-	--	/	+	--	++	0	+	+	/	++	++
Reason for rejection:		The site is within the Greenbelt.												
W24	S / M	+	-	++	-	++	/	++	0	++	--	/	--	-
	L	+	-	++	-	++	/	++	0	++	--	/	--	-
Reason for rejection		The site is not considered to be suitable in Highway Terms and/or does not comply with Transport Policy.												
W31	S / M	+	++	++	/	/	/	/	0	++	+	-	++	++
	L	+	++	++	/	/	/	/	0	++	+	/	++	++
Allocated Site – Reason for allocation:		The site scored highly against other sites considered for allocation in the Waste Site Assessment Report in consideration also of its suitability to meet the capacity gap requirements and conforms to the general principles of the Spatial Strategy												

		and the proximity principle.												
		An amendment since the Revised Preferred Approach (2015) stage SA regards the previous positive impact stated for the sustainable management of waste (SO9). This has been amended to a significant positive impacts associated with its positive waste use / permission history.												
W32	S / M	/	-	--	-	/	-	/	0	+	+	/	++	+
	L	/	-	--	-	/	-	/	0	+	+	/	++	+
Allocated Site – Reason for allocation:		<p>At the Revised Preferred Approach (2015) stage, this site was not selected. The site promoter put forward three proposals for inert recycling in this location: L(n)7R (55,000tpa), L(n)8R (30,000tpa) and W32 (80,000tpa) and previously L(n)7R was selected for inert recycling. The WPAs do not consider that three separate inert waste facilities at each of these three sites within the Little Bullocks / Crumps Farm operation would be capable of operating independently of each other and simultaneously from a practical standpoint. For this reason only one of the proposed sites has been included as a site allocation for inert waste recycling.</p> <p>W32 Crumps Farm has been selected because it provides for the most efficient use of the total waste site in conjunction with other existing and permitted operations. It has the largest potential capacity of the three proposals (80,000tpa), is located closer to the highway and would not displace any part of landfill operation on L(n)7R. L(n)8R is a less appropriate location for an inert recycling operation and has been selected for taking hazardous waste.</p> <p>W32 Crumps Farm will see an amendment from the Revised Preferred Approach (2015) SA. This responds to impacts regarding the sustainable management of waste (SO9) and an amendment from the significantly positive impact previously stated to a minor positive. This has been reassessed due to parts of the site not having relevant planning / history.</p>												
W35	S / M	/	-	++	-	/	/	/	0	++	--	-	--	+
	L	/	-	++	-	/	/	/	0	++	--	/	--	+
Reason for rejection		The site is not considered to be suitable in Highway Terms and/or does not comply with Transport Policy.												
SIE5	S / M	+	++	++	++	++	+	/	0	++	--	++	++	++
	L	+	++	++	++	++	+	/	0	++	--	/	++	++
Reason for rejection:		Since the Revised Preferred Approach (2015) stage, the site has been considered to not be suitable in Highway Terms and/or does not comply with Transport Policy. This is due to Grange Road being of an insufficient width to allow two HGVs to pass satisfactorily.												

Table 27: Appraisal of sites put forward for Open Air Facilities: End of Life Vehicle (ELV) Recycling Facilities

Sites for: END OF LIVE (ELV) RECYCLING FACILITIES														
Site Ref.	Temp Effect	Sustainability Objectives (SO)												
		1	2	3	4	5	6	7	8	9	10	11	12	13
W21	S / M	+	-	--	/	+	--	++	0	+	+	--	++	++
	L	+	-	--	/	+	--	++	0	+	+	/	++	++
Reason for rejection:		No new ELV Recycling facilities have been deemed necessary to specifically allocate within the Plan.												
W23	S / M	+	++	++	/	+	-	/	0	+	--	-	--	++
	L	+	++	++	/	+	-	/	0	+	--	/	--	++
Reason for rejection		No new ELV Recycling facilities have been deemed necessary to specifically allocate within the Plan. Also, the site is not considered to be suitable in Highway Terms and/or does not comply with Transport Policy.												
SIE5	S / M	+	++	++	++	++	+	/	0	++	--	++	++	++
	L	+	++	++	++	++	+	/	0	++	--	/	++	++
Reason for rejection:		No new ELV Recycling facilities have been deemed necessary to specifically allocate within the Plan. <i>Since the Revised Preferred Approach (2015) stage, the site has been considered to not be suitable in Highway Terms and/or does not comply with Transport Policy. This is due to Grange Road being of an insufficient width to allow two HGVs to pass satisfactorily.</i>												

Table 28: Appraisal of sites put forward for Open Air Facilities: Windrow Composting Facilities

Sites for: WINDROW COMPOSTING FACILITIES														
Site Ref.	Temp Effect	Sustainability Objectives (SO)												
		1	2	3	4	5	6	7	8	9	10	11	12	13
W7	S / M	+	-	--	/	+	+	++	0	++	/	/	+	++
	L	+	-	--	/	+	+	++	0	++	/	/	+	++
Reason for rejection:		<i>The WPAs have decided to prioritise meeting the forecasted biological recovery capacity need over the recycling of inert waste. This approach will reduce the amount of biological waste going to landfill. Sending biological waste to landfill, rather than inert waste, is considered to have greater environmental impacts, given the potential for such waste to generate bio-aerosols and greenhouse gases. As a result, this site was a preferred site for biological treatment at the Revised Preferred Approach (2015) stage. It</i>												

		<p>scored highly against other sites considered for allocation in the Waste Site Assessment Report, was also considered suitable to meet the capacity gap requirements and conformed to the general principles of the Spatial Strategy and the proximity principle.</p> <p>Since the Revised Preferred Approach (2015) stage, it has been determined that the previous five preferred sites for biological treatment can deliver a total of 259,000tpa which is over and above the 217,000tpa needed. As the site W7 Sandon East scored significantly lower than the other four sites and those four sites on their own would provide sufficient capacity it has been discounted for biological waste treatment. The site has instead been allocated for inert recycling.</p>												
W8	S / M	+	++	++	/	-	-	/	0	+	+	-	++	/
	L	+	++	++	/	-	-	/	0	+	+	/	++	/
Reason for rejection:		<p>This site has not been allocated for use for open windrow composting as it is also proposed for inert waste recycling, which has a greater capacity gap. Therefore, it is recommended as suitable for allocation for inert waste recycling instead and has been allocated for this use instead.</p> <p>An amendment has been made since the SA of the Revised Preferred Approach (2015) regarding historic environment impacts at W8 - Elsenham. Uncertain impacts were previously highlighted for certain facility types due to moderate issues regarding the historic environment (SO5), however a re-assessment of the site has led to a major impact issue (which may be acceptable subject to mitigation) being highlighted for all facility types. As such impacts are now negative.</p>												
W21	S / M	+	-	--	/	+	--	++	0	+	+	--	++	++
	L	+	-	--	/	+	--	++	0	+	+	/	++	++
Reason for rejection:		The site is within the Greenbelt.												
W24	S / M	+	-	++	-	++	/	++	0	++	--	/	--	-
	L	+	-	++	-	++	/	++	0	++	--	/	--	-
Reason for rejection		The site is not considered to be suitable in Highway Terms and/or does not comply with Transport Policy.												
W25	S / M	+	-	++	-	+	/	/	0	--	--	--	--	++
	L	+	-	++	-	+	/	/	0	--	--	/	--	++
Reason for rejection		<p>The site was not considered to be suitable in Highway Terms and/or did not comply with Transport Policy.</p> <p>This site has since been withdrawn by the site owner / developer.</p>												
W29	S / M	/	-	++	++	+	+	/	0	++	+	--	++	++
	L	/	-	++	++	+	+	/	0	++	+	/	++	++
Allocated Site –		The site scored highly against other sites considered for allocation in the Waste Site												

Reason for allocation:		Assessment Report. It is also considered suitable to meet the capacity gap requirements and conforms to the general principles of the Spatial Strategy and the proximity principle. This site is preferred for its suitability for allocation for biological treatment, although the specific facility type has not been determined at this point.												
W30	S / M	-	-	--	/	+	--	/	0	++	+	-	++	++
	L	-	-	--	/	+	--	/	0	++	+	/	++	++
Reason for rejection:		The site is within the Greenbelt.												

Table 29: Appraisal of sites put forward for Open Air Facilities: Inert Landfill Sites

Sites for: INERT LANDFILL SITES														
Site Ref.	Temp Effect	Sustainability Objectives (SO)												
		1	2	3	4	5	6	7	8	9	10	11	12	13
L(i)4R	S / M	/	--	++	++	/	--	/	0	++	/	--	+	++
	L	/	--	++	/	0	/	0	0	0	0	/	0	0
Reason for rejection		The site is within the Green Belt.												
L(i)5	S / M	/	--	++	++	/	++	/	0	+	/	--	+	++
	L	/	--	++	/	0	/	0	0	0	0	/	0	0
Allocated Site – Reason for allocation:		<p>The site scored highly against other sites considered for allocation in the Waste Site Assessment Report. It is also considered suitable to meet the capacity gap requirements and conforms to the general principles of the Spatial Strategy and the proximity principle.</p> <p>The decision to prioritise sites for the treatment of biological waste over inert waste recycling and also not to take sites forward where located in the greenbelt has resulted in fewer sites being available for inert waste treatment. As a consequence, the need for sites suitable for inert waste landfill has increased. There is therefore a continued need for the same preferred sites previously identified in the Revised Preferred Approach as L(i)10R Blackley Quarry, L(n)7R – Little Bullocks Farm site, L(n)1R Slough Farm, L(i)6 Sandon and L(i)5 Sunnymead, Elmstead and Heath Farms</p>												
L(i)6	S / M	-	--	--	++	+	/	++	0	++	/	--	++	++
	L	/	--	--	/	0	/	0	0	0	0	/	0	0
Allocated Site – Reason for allocation:		<p>The site scored highly against other sites considered for allocation in the Waste Site Assessment Report. It is also considered suitable to meet the capacity gap requirements and conforms to the general principles of the Spatial Strategy and the proximity principle.</p> <p>The decision to prioritise sites for the treatment of biological waste over inert waste recycling and also not to take sites forward where located in the greenbelt has</p>												

		<p>resulted in fewer sites being available for inert waste treatment. As a consequence, the need for sites suitable for inert waste landfill has increased. There is therefore a continued need for the same preferred sites previously identified in the Revised Preferred Approach as L(i)10R Blackley Quarry, L(n)7R – Little Bullocks Farm site, L(n)1R Slough Farm, L(i)6 Sandon and L(i)5 Sunnymeade, Elmstead and Heath Farms</p>												
L(i)7R	S / M	/	--	++	++	/	++	/	0	++	+	--	++	++
	L	/	--	++	/	0	/	0	0	0	0	/	0	0
Safeguarded site – Reason for safeguarding:		<p>The grant of planning permission for this activity means that this site must now be considered to contribute towards the total waste capacity in the Plan Area. Allocation of the site to support this activity is therefore unnecessary.</p>												
L(i)10R	S / M	+	--	++	++	+	/	++	0	+	+	--	++	++
	L	/	--	++	/	0	/	0	0	0	0	/	0	0
Allocated Site – Reason for allocation:		<p>The site scored highly against other sites considered for allocation in the Waste Site Assessment Report. It is also considered suitable to meet the capacity gap requirements and conforms to the general principles of the Spatial Strategy and the proximity principle.</p> <p>The decision to prioritise sites for the treatment of biological waste over inert waste recycling and also not to take sites forward where located in the greenbelt has resulted in fewer sites being available for inert waste treatment. As a consequence, the need for sites suitable for inert waste landfill has increased. There is therefore a continued need for the same preferred sites previously identified in the Revised Preferred Approach as L(i)10R Blackley Quarry, L(n)7R – Little Bullocks Farm site, L(n)1R Slough Farm, L(i)6 Sandon and L(i)5 Sunnymeade, Elmstead and Heath Farms</p>												
L(i)13	S / M	/	--	++	/	+	/	/	0	++	/	--	+	+
	L	/	--	++	/	0	/	0	0	0	0	/	0	0
Reason for rejection:		<p>There is an application for another incompatible use (housing) on the site which is pending.</p>												
L(i)15	S / M	/	--	++	/	+	++	++	0	++	++	--	++	++
	L	/	--	++	/	0	/	0	0	0	0	/	0	0
Allocated Site – Reason for allocation:		<p><i>Fingringhoe Quarry (Li15) was submitted as a site suitable for inert waste landfill by the landowner as part of the call for sites. Despite scoring well in the Waste Site Assessment Report, and being considered suitable for inert waste disposal, at the Revised Preferred Approach (2015) stage the WPAs chose not to include Fingringhoe Quarry as a preferred site allocation where it was considered that the inert fill material to be used at this site would be entirely sourced from London and imported to the site by barge via Ballast Quay Wharf. Waste arising in Essex or Southend-on-Sea would not be used to fill the void space (currently being created by the extraction of sand and gravel) and thus the site was not taken forward.</i></p>												

		<p><i>Since then the site promoter, through their representation (through the Revised Preferred Approach [2015] consultation) and subsequent correspondence, has been able to satisfy the Waste Planning Authorities that a reasonable portion of inert fill material to be used at this site can be sourced from within the Plan Area. For this reason, and the fact that an existing mineral void exists at the quarry, the site has now been allocated to contribute in meeting void space requirements..</i></p>												
L(i)16	S / M	+	--	--	/	+	--	++	0	+	+	--	++	++
	L	/	--	--	/	0	/	0	0	0	0	/	0	0
Reason for rejection :		The site is within the Green Belt.												
L(i)17R	S / M	/	--	++	-	+	++	++	0	+	/	--	+	+
	L	/	--	++	/	0	/	0	0	0	0	/	0	0
Allocated Site – Reason for allocation:		<p><i>Site L(i)17R Newport Quarry was put forward during the Revised Preferred Approach (2015) consultation. The site scored highly against other sites considered for allocation in the Waste Site Assessment Report and was identified as being able to meet inert landfill and recycling needs particularly in the west of the County. For these reasons the site has been allocated for both inert recycling and inert landfill.</i></p>												
L(n)1R	S / M	+	--	++	++	/	/	++	0	+	/	--	+	++
	L	/	--	++	/	0	/	0	0	0	0	/	0	0
Allocated Site – Reason for allocation:		<p>The site scored highly against other sites considered for allocation in the Waste Site Assessment Report. It is also considered suitable to meet the capacity gap requirements and conforms to the general principles of the Spatial Strategy and the proximity principle.</p> <p>The decision to prioritise sites for the treatment of biological waste over inert waste recycling and also not to take sites forward where located in the greenbelt has resulted in fewer sites being available for inert waste treatment. As a consequence, the need for sites suitable for inert waste landfill has increased. There is therefore a continued need for the same preferred sites previously identified in the Revised Preferred Approach as L(i)10R Blackley Quarry, L(n)7R – Little Bullocks Farm site, L(n)1R Slough Farm, L(i)6 Sandon and L(i)5 Sunnymead, Elmstead and Heath Farms</p>												
L(n)5	S / M	/	--	++	++	+	+	/	0	++	+	--	++	++
	L	/	--	++	/	0	/	0	0	0	0	/	0	0
Allocated Site – Reason for allocation:		<p><i>Despite scoring well as part of the site selection process the large L(n)5 Bellhouse site (which currently takes non-hazardous wastes and has an agreed restoration plan) was not taken forward as part of the Revised Preferred Approach. This was due to reservations that it was close to other sites in this area near Colchester (such as L(i)7 Stanway). However, given re-assessment it is prudent to now include it as an inert landfill site.</i></p> <p><i>It should be noted that a change in a significant positive impact identified in the SA at the Revised Preferred Approach (2015) stage for L(n)5 –</i></p>												

		<i>Bellhouse has been necessary at this stage regarding SO6 (landscape). This is due to a re-assessment which has established that there would be a minor adverse effect regarding views from receptors (properties and a PROW).</i>												
L(n)7R	S / M	/	--	--	++	/	/	/	0	+	+	/	++	/
	L	/	--	--	/	0	/	0	0	0	0	/	0	0
Allocated Site – Reason for allocation:		<p>The site scored highly against other sites considered for allocation in the Waste Site Assessment Report. It is also considered suitable to meet the capacity gap requirements and conforms to the general principles of the Spatial Strategy and the proximity principle.</p> <p>The decision to prioritise sites for the treatment of biological waste over inert waste recycling and also not to take sites forward where located in the greenbelt has resulted in fewer sites being available for inert waste treatment. As a consequence, the need for sites suitable for inert waste landfill has increased. There is therefore a continued need for the same preferred sites previously identified in the Revised Preferred Approach as L(i)10R Blackley Quarry, L(n)7R – Little Bullocks Farm site, L(n)1R Slough Farm, L(i)6 Sandon and L(i)5 Sunnymead, Elmstead and Heath Farms</p> <p><i>There is also an amendment from the SA of the Revised Preferred Approach (2015) regarding an erroneous impact on the sustainable management of waste (SO9) at site L(n)7R – Little Bullocks Farm Site A22. This is due to the site being Greenfield land with no planning history within the specific red-line boundary of the site. As such, the significant positive impact highlighted at the Revised Preferred Approach (2015) stage SA has been amended to be a minor positive impact. In addition, the site was also previously erroneously judged to have significant positive impacts on flooding (SO3) for certain uses / facilities, however a small amount of the site is within FZ3. As such the site will now have significantly negative impacts on this objective. A re-assessment of the site now also indicates that there will moderate impacts on landscape which will give rise to an uncertain impact on SO6; an amendment of a significantly positive score highlighted in the SA at the Revised Preferred Approach (2015) stage.</i></p>												
L(n)8R	S / M	/	--	++	++	+	-	/	0	+	+	--	++	/
	L	/	--	++	/	0	/	0	0	0	0	/	0	0
Reason for rejection:		<p>This is the only landfill site that has been proposed as suitable for taking hazardous waste, which may be required during the plan period. The site has been allocated for the landfill of hazardous waste and as such rejected for allocation for inert landfill in the Plan.</p> <p><i>There is an amendment from the SA of the Revised Preferred Approach (2015) regarding an erroneous impact on the sustainable management of waste (SO9) at site L(n)8R. This is due to the site being Greenfield land with no planning history within the specific red-line boundary of the site. As such, the significant positive impact highlighted at the Revised Preferred Approach (2015) stage SA has been amended to be a minor positive impact. A re-assessment of the site now also indicates that there will</i></p>												

moderate to major effects on landscape which will give rise to an negative impact on SO6; an amendment of an uncertain score highlighted in the SA at the Revised Preferred Approach (2015) stage.

Table 30: Appraisal of sites put forward for Open Air Facilities: Non-hazardous Landfill Sites

Sites for: NON-HAZARDOUS LANDFILL SITES														
Site Ref.	Temp Effect	Sustainability Objectives (SO)												
		1	2	3	4	5	6	7	8	9	10	11	12	13
L(i)16	S / M	+	--	--	/	+	--	++	0	+	+	--	++	++
	L	/	--	--	/	0	/	0	0	0	0	/	0	0
Reason for rejection:		The site is within the Green Belt. It is assessed within Topic Paper 1: Waste Capacity Gap Update (2015) that there is adequate capacity for non-hazardous waste disposal throughout the Plan period. There is no requirement for additional non-hazardous landfill void space capacity.												
L(n)1R	S / M	+	--	++	++	/	/	++	0	+	/	--	+	++
	L	/	--	++	/	0	/	0	0	0	0	/	0	0
Reason for rejection:		It is assessed within Topic Paper 1: Waste Capacity Gap Update (2015) that there is adequate capacity for non-hazardous waste disposal throughout the Plan period. There is no requirement for additional non-hazardous landfill void space capacity.												
L(n)5	S / M	/	--	++	++	+	+	/	0	++	+	--	++	++
	L	/	--	++	/	0	/	0	0	0	0	/	0	0
Reason for rejection:		It is assessed within Topic Paper 1: Waste Capacity Gap Update (2015) that there is adequate capacity for non-hazardous waste disposal throughout the Plan period. There is no requirement for additional non-hazardous landfill void space capacity.. <i>It should be noted that a change in a significant positive impact identified in the SA at the Revised Preferred Approach (2015) stage for L(n)5 – Bellhouse has been necessary at this stage regarding SO6 (landscape). This is due to a re-assessment which has established that there would be a minor adverse effect regarding views from receptors (properties and a PROW).</i>												
L(n)6R	S / M	-	--	--	++	+	--	/	0	++	+	--	++	++
	L	/	--	--	/	0	/	0	0	0	0	/	0	0
Reason for rejection:		The site is within the Green Belt. It is assessed within Topic Paper 1: Waste Capacity Gap Update (2015) that there is adequate capacity for non-hazardous waste disposal throughout the Plan period. There is no requirement for additional non-hazardous landfill void space capacity.												
L(n)7R	S / M	/	--	--	++	/	/	/	0	+	+	/	++	/
	L	/	--	--	/	0	/	0	0	0	0	/	0	0

Reason for rejection:		<p>It is assessed within Topic Paper 1: Waste Capacity Gap Update (2015) that there is adequate capacity for non-hazardous waste disposal throughout the Plan period. There is no requirement for additional non-hazardous landfill void space capacity.. The site is however allocated for another landfilling use.</p> <p><i>There is also an amendment from the SA of the Revised Preferred Approach (2015) regarding an erroneous impact on the sustainable management of waste (SO9) at site L(n)7R – Little Bullocks Farm Site A22. This is due to the site being Greenfield land with no planning history within the specific red-line boundary of the site. As such, the significant positive impact highlighted at the Revised Preferred Approach (2015) stage SA has been amended to be a minor positive impact. In addition, the site was also previously erroneously judged to have significant positive impacts on flooding (SO3) for certain uses / facilities, however a small amount of the site is within FZ3. As such the site will now have significantly negative impacts on this objective. A re-assessment of the site now also indicates that there will moderate impacts on landscape which will give rise to an uncertain impact on SO6; an amendment of a significantly positive score highlighted in the SA at the Revised Preferred Approach (2015) stage.</i></p>													
L(n)8R	S / M	/	--	++	++	+	-	/	0	+	+	--	++	/	
	L	/	--	++	/	0	/	0	0	0	0	/	0	0	
Reason for rejection:		<p>It is assessed within Topic Paper 1: Waste Capacity Gap Update (2015) that there is adequate capacity for non-hazardous waste disposal throughout the Plan period. There is no requirement for additional non-hazardous landfill void space capacity.. The site is however allocated for another landfilling use.</p> <p><i>There is an amendment from the SA of the Revised Preferred Approach (2015) regarding an erroneous impact on the sustainable management of waste (SO9) at site L(n)8R. This is due to the site being Greenfield land with no planning history within the specific red-line boundary of the site. As such, the significant positive impact highlighted at the Revised Preferred Approach (2015) stage SA has been amended to be a minor positive impact. A re-assessment of the site now also indicates that there will moderate to major effects on landscape which will give rise to an negative impact on SO6; an amendment of an uncertain score highlighted in the SA at the Revised Preferred Approach (2015) stage.</i></p>													

Table 31: Appraisal of sites put forward for Open Air Facilities: Hazardous Landfill Sites

Sites for: HAZARDOUS LANDFILL SITES														
Site Ref.	Temp Effect	Sustainability Objectives (SO)												
		1	2	3	4	5	6	7	8	9	10	11	12	13
L(n)8R	S / M	/	--	++	++	+	-	/	0	+	+	--	++	/
	L	/	--	++	/	0	/	0	0	0	0	/	0	0
Preferred Site – Reason for		This is the only landfill site that has been proposed as suitable for taking hazardous waste. It has not been allocated for alternative uses as preferred use was for a												

allocation:	<p>stable non-reactive hazardous landfill and allocated accordingly in the Plan.</p> <p><i>There is an amendment from the SA of the Revised Preferred Approach (2015) regarding an erroneous impact on the sustainable management of waste (SO9) at site L(n)8R. This is due to the site being Greenfield land with no planning history within the specific red-line boundary of the site. As such, the significant positive impact highlighted at the Revised Preferred Approach (2015) stage SA has been amended to be a minor positive impact. A re-assessment of the site now also indicates that there will moderate to major effects on landscape which will give rise to an negative impact on SO6; an amendment of an uncertain score highlighted in the SA at the Revised Preferred Approach (2015) stage.</i></p>
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8 Conclusions

8.1 The Vision, Strategic Objectives and Spatial Strategy

	Sustainability Objectives (SO)												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Vision	+	+	+	+	+	+	+	+	++	+	+	+	+
Strategic Objs	+	0	0	++	0	/	+	++	++	+	++	+	++
Spatial Strategy	/	/	/	+	/	/	/	/	++	++	/	/	++

- The Vision focuses on waste management, and as such the only significant effect will be realised for Sustainability Objective 9 (defined as ‘to ensure the sustainable management of waste landfilled, to maximise the re-use, recovery and recycling of waste and to promote the minimisation of waste produced at source’). The Vision strongly adheres to this objective through a commitment to the specifics of the Waste Hierarchy without disregarding the Plan Area’s key issues and requirements.
- The Strategic Objectives will have significant positive impacts on SO4 (to maximise the sustainable use of land and the protection of soils, safeguarding the best and most versatile agricultural land), SO8 (to maximise energy efficiency, the proportion of energy generated from renewable sources and adaptability to climate change); SO9 (to ensure the sustainable management of waste landfilled, to maximise the re-use, recovery and recycling of waste and to promote the minimisation of waste produced at source); SO11 (to protect human health and well-being and maintain the quality and quantity of public open space amenity across Essex and Southend); and SO13 (to maximise opportunities for economic development, including jobs, arising from waste related activities). There is a single uncertain impact on landscape and townscape character (SO6) where it is unclear whether this issue is covered under ‘general amenity’. It should be acknowledged however that there will be indirect positive impacts on a number of the Sustainability Objectives assessed as having ‘no impact’.
- The Spatial Strategy will have significant positive impacts on the sustainable management of waste (SO9), the sustainable transportation of waste (SO10) and economic growth (SO13) in line with commitments to allocating and safeguarding strategic sites, a network of LACW transfer stations and a general distribution focused on key centres for growth.

8.1.1 Recommendations Regarding the Proposed Vision, Strategic Objectives and Spatial Strategy

- There is scope for the Strategic Objectives to cover landscape, townscape and the historic environment more clearly, possibly within Strategic Objective 8, where the issue is not directly relevant to environmental or amenity concerns.

8.2 The Policies (Excluding Strategic Allocations [Policy 3])

	Sustainability Objectives (SO)												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Policy 1	0	0	0	0	0	0	0	0	++	0	0	0	0
Policy 2	/	/	/	+	/	/	/	+	++	+	+	+	++
Policy 4	0	/	0	+	0	0	/	0	++	+	0	0	/
Policy 5	0	0	0	++	0	0	/	++	++	++	0	+	+
Policy 6	0	0	0	++	0	0	/	0	++	++	0	+	+
Policy 7	0	0	0	++	0	0	0	0	++	++	0	0	+
Policy 8	0	0	0	++	0	0	0	0	++	0	0	0	+
Policy 9	+	0	0	++	0	++	0	++	++	+	+	0	0
Policy 10	++	++	+	+	++	++	+	0	0	++	++	++	0
Policy 11	0	++	++	0	/	/	++	++	+	++	+	0	0
Policy 12	0	0	0	0	0	0	+	0	0	++	0	+	0
Policy 13	++	+	+	++	+	++	0	0	++	0	+	0	++
Policy 14	+	+	0	0	0	0	0	+	+	0	+	0	+

- The Plan's policies, excluding Policy 3 which looks at Strategic Site Allocations and has been explored separately, will have significant positive impacts on all of the Sustainability Objectives. Most clearly, they can be seen to adhere to the Plan's principle aim; that being the sustainable management of waste (SO9) in the Plan Area.
- The Plan will also have a large number of significant positive impacts on the sustainable use of land, predominantly as a result of the Plan's locational criteria policies.
- The Plan's general approach to the sustainable transportation of waste, emanating through the majority of Policies, will also give rise to a large number of significantly positive impacts.
- The Plan can be seen to have a comparatively large amount of uncertain impacts on Sustainability Objective 7, regarding air quality. This is due to the Plan's approach to co-location of waste management facilities with non-waste development, predominantly resulting from the Areas of Search and locational criteria. This is due to the possibility of existing industrial areas, the preferred locations identified as suitable for such co-location, already experiencing large movements of vehicles. It should be acknowledged however, that the principle of development, including waste development as a compatible and similar use to industrial uses, is already established and designed on such sites.

8.2.1 Recommendations Regarding the Policies (Excluding Strategic Allocations)

One recommendation has been made to the Plan's Strategic Objectives. This is:

- Strategic Objectives - There is scope for the Strategic Objectives to cover landscape, townscape and the historic environment more clearly, possibly within Strategic Objective 8, where the issue is not directly relevant to environmental or amenity concerns. Despite this

though the SA is satisfied that these issues are sufficiently covered in other Plan Policies and also through the site assessment methodology used to select appropriate sites.

There are no other recommendations to any of the Policies at this stage. Recommendations have been factored into the Plan at various stages of the SA and plan-making process. These are highlighted below:

- Policy 10 - The SA of the Revised Preferred Approach (2015) recommended that, ‘the supporting text highlights the range of sites with international designation in the Plan Area, and recognises the fact that the impacts of development on biodiversity should be fully understood; however it is recommended that this Policy, or the supporting text, be expanded to reflect the possibility of impacts on Natura 2000 sites in line with the findings of the HRA. The policy could be more specific as to the possible requirements of the developer to, in accompaniment to any planning application, undertake project-level HRA or Appropriate Assessment to ascertain the implications of development on such designations and in accumulation with other developments, plans and programmes in the Plan Area.’ The WPAs, through Policy 10, have factored in this recommendation, and the approach has been amended accordingly. The policy now includes that proposals for waste management facilities will have to demonstrate that they would not have an unacceptable impact on internationally, nationally or locally designated sites and the supporting text, in elaborating on what would be required to demonstrate this, includes the possible need for project-level HRA to accompany certain schemes in certain locations.

8.3 The Strategic Site Allocations (Policy 3)

The following table shows the sustainability impacts of the strategic site allocations of the Plan.

Sites for: BIOLOGICAL WASTE MANAGEMENT														
Site Ref.	Temp Effect	Sustainability Objectives (SO)												
		1	2	3	4	5	6	7	8	9	10	11	12	13
W29 Bellhouse	S / M	/	-	++	++	/	-	/	/	+	+	--	++	++
	L	/	-	++	++	/	-	/	/	+	+	/	++	++
W3 Basildon WWTW	S / M	/	-	/	/	+	/	++	0	++	+	-	++	++
	L	/	-	/	/	+	/	++	0	++	+	/	++	++
W20 Courtauld Road	S / M	/	-	++	/	++	/	++	0	++	+	-	+	++
	L	/	-	++	/	++	/	++	0	++	+	/	+	++
IWMF2 - Rivenhall	S / M	+	-	++	-	++	-	++	++	++	+	--	++	++
	L	+	-	++	-	++	-	++	++	++	+	/	++	++
Sites for: INERT WASTE RECYCLING														
Site Ref.	Temp Effect	Sustainability Objectives (SO)												
		1	2	3	4	5	6	7	8	9	10	11	12	13
W32 Crumps Farm	S / M	/	-	--	-	/	-	/	0	+	+	/	++	+
	L	/	-	--	-	/	-	/	0	+	+	/	++	+

W8 Elsenham	S / M	+	++	++	/	-	-	/	0	+	+	-	++	/
	L	+	++	++	/	-	-	/	0	+	+	/	++	/
W7 Sandon East	S / M	+	-	--	/	+	+	++	0	++	/	-	+	++
	L	+	-	--	/	+	+	++	0	++	/	/	+	++
L(n)1R Slough Farm	S / M	+	-	++	++	/	/	++	0	+	/	-	+	++
	L	+	-	++	++	/	/	++	0	+	/	/	+	++
L(i)10R Blackley (Site 1)	S / M	+	-	++	++	+	/	++	0	+	+	--	++	++
	L	+	-	++	++	+	/	++	0	+	+	/	++	++
W13 Wivenhoe Quarry	S / M	/	-	++	-	++	/	/	0	++	/	--	+	++
	L	/	-	++	-	++	/	/	0	++	/	/	+	++
W31 Morses Lane	S / M	+	++	++	/	/	/	/	0	++	+	-	++	++
	L	+	++	++	/	/	/	/	0	++	+	/	++	++
L(i)17R Newport Quarry	S / M	/	-	++	-	+	++	++	0	+	/	-	+	+
	L	/	-	++	-	+	++	++	0	+	/	/	+	+
Site for: OTHER WASTE MANAGEMENT														
Site Ref.	Temp Effect	Sustainability Objectives (SO)												
		1	2	3	4	5	6	7	8	9	10	11	12	13
IWMF2 Rivenhall	S / M	+	-	++	-	++	/	++	++	++	+	--	++	/
	L	+	-	++	-	++	/	++	++	++	+	/	++	/
Sites for: INERT LANDFILL														
Site Ref.	Temp Effect	Sustainability Objectives (SO)												
		1	2	3	4	5	6	7	8	9	10	11	12	13
L(n)7R Little Bullocks A22	S / M	/	--	--	++	/	/	/	0	+	+	--	++	+
	L	/	--	--	/	0	/	0	0	0	0	/	0	0
L(n)1R Slough Farm	S / M	+	--	++	++	/	/	++	0	+	/	--	+	++
	L	/	--	++	/	0	/	0	0	0	0	/	0	0
L(i)10 Blackley (Site 1)	S / M	+	--	++	++	+	/	++	0	+	+	--	++	++
	L	/	--	++	/	0	/	0	0	0	0	/	0	0
L(i)6 Sandon	S / M	-	--	--	++	+	/	++	0	++	/	--	++	++
	L	/	--	--	/	0	/	0	0	0	0	/	0	0

L(i)5 Sunnymead	S / M	/	--	++	++	/	++	/	0	+	/	--	+	++
	L	/	--	++	/	0	/	0	0	0	0	/	0	0
L(i)17R Newport Quarry	S / M	/	--	++	-	+	++	++	0	+	/	--	+	+
	L	/	--	++	/	0	/	0	0	0	0	/	0	0
L(n)5 Bellhouse	S / M	/	--	++	++	+	+	/	0	++	+	--	++	++
	L	/	--	++	/	0	/	0	0	0	0	/	0	0
L(i)15 Fingringhoe	S / M	/	--	++	/	+	++	++	0	++	++	--	++	++
	L	/	--	++	/	0	/	0	0	0	0	/	0	0
Sites for: (STABLE NON-REACTIVE) HAZARDOUS WASTE LANDFILL														
Site Ref.	Temp Effect	Sustainability Objectives (SO)												
		1	2	3	4	5	6	7	8	9	10	11	12	13
L(n)8R Little Bullocks	S / M	/	--	++	++	+	-	/	0	+	+	--	++	/
	L	/	--	++	/	0	/	0	0	0	0	/	0	0

- The Strategic Site Allocations can be seen to have a range of positive and negative impacts on the sustainability objectives. Their comparison to alternative sites however indicates that these offer the most sustainable solutions, especially in regard to both capacity gap requirements and conformity to the principles and rationale of the Plan's Spatial Strategy.
- The Strategic Site Allocations have changed since the Revised Preferred Approach (2015). This is largely due to some sites now not being promoted for some specific facility types, the withdrawal of others from the process, the re-assessment of sites in response to the consultation of the Revised Preferred Approach (2015) stage Plan, and also the update to the Waste Capacity Gap Report.
- In focusing on the allocations' negative impacts, most can be seen as individual impacts associated with the nature and principle of waste management facilities, and a cautious approach to assessment regarding the impacts on social indicators and general amenity.
- Particularly, this has responded to negative impacts being predicted for well-being (SO11) should any properties lie within 250m of sites, and also water quality (SO2) where water bodies lie within or adjacent to sites. It should be acknowledged however that individual impacts can often be mitigated on site and those impacts highlighted above do not factor in the development principles stated in Appendix B of the Plan that outline issues and opportunities to be addressed on a site-by-site basis. These principles exist in response to negative impacts highlighted, and have been identified for this reason.

8.3.1 Cumulative Impacts of the Strategic Site Allocations by Sustainability Objective

This section looks at the combined impacts of the allocated sites per Sustainability Objective. This goes some way to highlight the cumulative and synergistic impacts of all the sites in total. These impacts are elaborated on and explained in the corresponding commentary. The following table indicates the proportion (and number) of all sites that have a specific impact on each Sustainability

Objective.

Table 32: Cumulative Impacts of all Preferred Sites by Sustainability Objective

Sustainability Objectives (SO)	Cumulative Impacts of all Preferred Sites			
1 Biodiversity	9	12		1
2 Water	2	11	9	
3 Flooding	17			1 4
4 Sustainable use of land	10		6	6
5 Cultural Heritage	4	10		7 1
6 Landscape	4	2	11	5
7 Air Quality	13		5	4
8 Energy	2	1	19	
9 Waste management	10		12	
10 Transport	1	13		8
11 Health & well-being	1	7	14	
12 Nuisance and access	14		8	
13 Economic growth	15		4	3

- As can be seen from the above there will be largely positive impacts from the allocated sites. Despite this, overall water quality (SO2) in the Plan Area could be seen to suffer from the allocations. It should be noted however that many of these impacts will be localised and that development principles, exist within the Plan for each site to ensure that such impacts are appropriately mitigated. In addition, Policy 10 of the Plan has integrated a stronger stance on the protection of water quality, in response to these highlighted impacts.
- A majority proportion of those impacts predicted for landscape quality (SO6) are either uncertain or negative, which translate as moderate to high impacts. The cumulative impact of landscapes in the Plan Area could be seen to deteriorate as a result of the allocations; however again, development principles exist to mitigate such impacts on a site-by-site basis.
- The Plan's allocated sites can be seen to have a large degree of negative impacts on

health and well-being (SO11), associated largely with one or more sensitive receptors (properties) being in close proximity to sites and/or PROWs being on or adjacent to sites. Whilst the extent of these negative impacts appears significant, it should be acknowledged that a single sensitive use being within 250m of the allocation (regardless of facility type) reduced the stated impacts accordingly and in fact such an impact would be capable of mitigation. It should also be acknowledged that, in line with the proximity principle, allocations in close proximity to key centres of growth are invariably more likely to encounter sensitive uses in their vicinity. Development principles exist for all the allocated sites, as specified in Appendix B of the Plan, and these contain a number of measures to protect local amenity. In addition, PROWs will have to be re-routed should they be disrupted and the Environment Agency addresses odour issues through the Pollution regime. As such, the negative impacts highlighted are unlikely to be forthcoming from any of the proposals.

- There will be a significant positive cumulative impact on employment opportunities from waste management (SO13) resulting from the allocated sites' proximity to key towns and centres for growth.

8.3.2 Cumulative Impacts of the Strategic Site Allocations by Broad Area

The allocated sites can be seen to accord well with three key elements of the Plan's Core Strategy; the Spatial Strategy itself, locating sites in mind of the proximity principle and in areas well connected to the strategic road network. Despite this, there may be cumulative localised issues emanating from the Plan's site allocations.

It should be noted that this section explores those impacts where clusters of sites exist, or where any other similarities between sites have been identified and discussed. The potential for cumulative impacts have been identified on the following clusters or groupings of sites as follows:

- L(n)8R, L(n)7R, and W32 (Uttlesford cluster 1)
- W7 and L(i)6 (Chelmsford cluster)
- L(n)5 and W29 (Colchester cluster)
- L(i)15, L(i)5 and W13 (Colchester / Tendring cluster)
- W3 and W20 (Basildon cluster)
- W8 and (Li)17R (Uttlesford cluster 2)

The potential for cumulative impacts on these clusters is explored in the following tables.

Table 33: Cumulative Impacts of sites L(n)8R, L(n)7R and W32

Site Ref.	Temp Effect	Sustainability Objectives (SO)												
		1	2	3	4	5	6	7	8	9	10	11	12	13
L(n)8R Little Bullocks	S / M	/	--	++	++	+	-	/	0	+	+	--	++	/
	L	/	--	++	/	0	/	0	0	0	0	/	0	0
L(n)7R Little Bullocks A22	S / M	/	--	--	++	/	/	/	0	+	+	--	++	+
	L	/	--	--	/	0	/	0	0	0	0	/	0	0
W32 Crumps Farm	S / M	/	-	--	-	/	-	/	0	+	+	/	++	+
	L	/	-	--	-	/	-	/	0	+	+	/	++	+

- The sites of L(n)8R, L(n)7R and W32 are all in close proximity to each other, and share a lot of impacts as a result. It can be seen that, in addition to there being significant negative impacts on water quality (SO2) as a result of each allocation individually, there may be further cumulative negative impacts on this objective. The Plan however, recognises the shared impacts of these sites, and although grouped and allocated for different facility types within the Plan, looks at them as a suite of allocations. Each site has different development principles in Appendix B of the Plan that are closely linked and relevant to each specific use, but there will be shared common benefits. The need for a hydrological assessment for site L(n)8R ensures that water quality issues are addressed in terms of hazardous landfill operations in the area. Inert recycling at site W32 will have a lesser impact on water quality and has been raised due to the proximity of a water body and can be mitigated through the requirements of Policy 10, which includes added emphasis on potential water quality issues. It is therefore viewed that the recommendation has been sufficiently factored into the Plan, where effective measures to mitigate the impacts on water quality in the area will be sought and adequately addressed.
- All of the sites will have uncertain impacts on biodiversity, due to their proximity to a LoWS. It is therefore possible that any impacts could magnify cumulatively. The SA at the Revised Preferred Approach (2015) stage indicated that a stance on mitigation would be required for the individual sites. The development principles for both landfill sites state that the LoWS would require protection for example through an appropriate buffer of at least 15m and that existing vegetation should be protected and retained. This seeks to alleviate the possible impacts resulting from these sites.
- Although the sites can be seen to have appropriate transport infrastructure individually, the SA at the Revised Preferred Approach (2015) stage highlighted the cumulative impact of these sites on the localised transport network, and that these would have to be explored in further detail due to their proximity to each other. The development principle for L(n)7R states that a vehicle routing agreement is required to ensure the site would be accessed via the existing access for Crumps Farm onto Stortford Road (B1256) to travel via the A120/M11 and that an internal haul road would be required between the site and the Crumps Farm access. It is considered that this individual requirement would go some way to alleviate the cumulative impact that could arise from this cluster of allocated sites.
- No other significant negative cumulative impacts have been highlighted that can not be

mitigated through each site individually. This includes those impacts associated with sensitive receptors within 250m of each site.

Table 34: Cumulative Impacts of sites W7 and L(i)6

Site Ref.	Temp Effect	Sustainability Objectives (SO)												
		1	2	3	4	5	6	7	8	9	10	11	12	13
W7 Sandon East	S / M	+	-	--	/	+	+	++	0	++	/	/	+	++
	L	+	-	--	/	+	+	++	0	++	/	/	+	++
L(i)6 Sandon	S / M	-	--	--	++	+	/	++	0	++	/	--	++	++
	L	/	--	--	/	0	/	0	0	0	0	/	0	0

- Regarding the cumulative impacts of the two sites at Sandon, it should be noted the area of L(i)6 includes the area of W7 and has been appraised as such in this SA. With that in mind, the appraisal of L(i)6 can be seen as reflective of the cumulative impacts of the two Sandon sites.
- The Sandon sites both have a range of negative impacts on water quality (SO2) and flooding (SO3). Despite this, there will be no further cumulative impacts, due to different water bodies being affected that are distinctly separate to specific areas of the site and as such unrelated to each other. The proportion of the site in FZ3 is very small in comparison to the total size of the site and the planning permission of the current operation on the site ensures that there will be no impacts resulting from the allocated uses.
- The SA at the Revised Preferred Approach (2015) stage stated that the cumulative impact of these sites on the localised transport network would also have to be explored in further detail due to their proximity to each other. It should be noted the development principles for the combined site states that improvements will be required to the A1114 (Essex Yeomanry Way) /Southend Road southbound off slip road and that a traffic management/priority control system to manage the single width private haul road in the vicinity of the site access, or alternative solution e.g. road widening/passing bays will be required. These development principles, outlining issues and opportunities to be addressed, sufficiently remove the possibility of cumulative negative impacts on transport where implemented.
- No other significant negative cumulative impacts have been highlighted that can not be mitigated through each site individually.

Table 35: Cumulative Impacts of sites L(n)5 and W29

Site Ref.	Temp Effect	Sustainability Objectives (SO)												
		1	2	3	4	5	6	7	8	9	10	11	12	13
L(n)5 Bellhouse	S / M	/	--	++	++	+	+	/	0	++	+	--	++	++
	L	/	--	++	/	0	/	0	0	0	0	/	0	0
W29 Bellhouse	S / M	/	-	++	++	/	-	/	/	+	+	--	++	++
	L	/	-	++	++	/	-	/	/	+	+	/	++	++

- Although considered a single site, the site contains two different operations, namely biological treatment and inert landfill, and these have therefore been assessed separately. Proposed activities on the Bellhouse allocation can be seen to have negative impacts on water quality (SO2) due to the proximity of water bodies to both portions of the site and biodiversity (SO1) due to the presence of nearby LoWSs. The two different operations on site could lead to cumulative impacts on both of these objectives. The development principles for the combined site identifies these issues as a single theme, and states that an appropriate buffer of at least 15m would be provided around CO5 8 Gol Grove and Hanging Wood Local Wildlife Sites and the Roman River. Any new scheme will need to be consistent with the approved restoration scheme for the existing landfill site. As such, it is considered that there would be no cumulative impacts associated with water quality (SO2) or biodiversity (SO1).
- In addition, both operations can be seen to have significantly negative impacts on health and well-being (SO11) due to sensitive receptors (properties) being located within 250m of the combined site area. Again, cumulative impacts are not expected to occur, through the existence of a combined site development principle that states that limits on duration (hours of operation) and noise standards (from noise sensitive properties including Bellhouse Farm) would be required in the interests of protecting local amenity. In addition, any potential odour issues will be addressed by the Environment Agency in the interests of protecting local amenity.

Table 36: Cumulative Impacts of sites W13, L(i)15 and L(i)5

Site Ref.	Temp Effect	Sustainability Objectives (SO)												
		1	2	3	4	5	6	7	8	9	10	11	12	13
W13 Wivenhoe Quarry	S / M	/	-	++	-	++	/	/	0	++	/	--	+	++
	L	/	-	++	-	++	/	/	0	++	/	/	+	++
L(i)15 Fingringhoe	S / M	/	--	++	/	+	++	++	0	++	++	--	++	++
	L	/	--	++	/	0	/	0	0	0	0	/	0	0
L(i)5 Sunnymead	S / M	/	--	++	++	/	++	/	0	+	/	--	+	++
	L	/	--	++	/	0	/	0	0	0	0	/	0	0

- The sites of W13, L(i)15 and L(i)5 have been grouped where they are located in a broadly similar location, and also in regard to their possible impacts on biodiversity through the international designation of the Colne Estuary as an SPA and Ramsar. In addition to development principles for these sites stating that likely significant effects on the nearby international wildlife sites need to be considered, it should additionally be noted that the Plan, as per the recommendation of the HRA, states that 'planning permission for waste management development within or otherwise affecting an international site (Natura 2000 site) will only be granted where the conclusions of a project-level Habitats Regulations Assessment (HRA), as required for those proposals highlighted within the HRA of the Plan, demonstrate that the proposal will have no adverse impacts on the integrity of any site, either alone or in combination with other plans or projects.' Screening distances are also provided as a guide for potential applicants in relation to the triggers for project-level HRA. The inclusion of this requirement in the Plan will effectively determine whether any impacts

on internationally designated sites are likely. Additionally, project-level HRA will also identify the impacts of proposals in combination with other relevant projects, plans and programmes within the Plan Area. As such there will be no cumulative impacts on biodiversity.

- The sites also have individual negative impacts on water quality (SO2), associated with water bodies in or adjacent to the sites. The differences between negative impacts and significantly negative impacts in the case of these sites is related to the use; landfill warranting more significant impacts due solely to the nature of waste disposal. It is recommended that the mitigation of these water quality issues is included as a development principle for each site. Despite this, and although no development principles exist for any of these sites regarding water quality issues currently, the general theme of water quality has been given additional weight in Policy 10 of the Plan. As such, and in accordance with Policy 10, 'proposals for waste management development will be permitted where it can be demonstrated that the development would not have an unacceptable impact (including cumulative impact in combination with other existing or permitted development) on...(b) The quality and quantity of water within water courses, groundwater and surface water.' This effectively alleviates any concerns regarding the cumulative impacts of water quality regarding this cluster of sites.
- Any cumulative impacts associated with the individual significant negative impacts highlighted for health and well-being (SO11) on all of the sites, are effectively neutralised by each site's development principles that require dust mitigation measures, limits on duration (hours of operation) and noise standards (from noise sensitive properties) in the interests of protecting local amenity.

Table 37: Cumulative Impacts of sites W3 and W20

Site Ref.	Temp Effect	Sustainability Objectives (SO)												
		1	2	3	4	5	6	7	8	9	10	11	12	13
W3 Basildon WWTW	S / M	/	-	/	/	+	/	++	0	++	+	-	++	++
	L	/	-	/	/	+	/	++	0	++	+	/	++	++
W20 Courtauld Road	S / M	/	-	++	/	++	/	++	0	++	+	-	+	++
	L	/	-	++	/	++	/	++	0	++	+	/	+	++

- As can be seen from the above comparative assessments of the sites W3 and W20 in Basildon, there are a number of significant positive impacts associated with minimising environmental effects, and in the sustainable management of waste (SO9).
- The cumulative impact of these sites on the localised transport network (SO10) would have to be explored in further detail, due to the sites being located in very close proximity to another. This was an issue raised in the SA of the Revised Preferred Approach (2015). Since then, development principles for the sites have been included within the Plan to address specific issues and / or opportunities. With regard to site W3 Basildon WWTW, confirmation will be needed as to how internal access arrangements in relation to Courtauld Road in order to adequately alleviate any cumulative impacts.
- No other significant negative cumulative impacts have been highlighted that can not be mitigated through each site individually.
- Any cumulative impacts associated with the individual negative impacts highlighted for

health and well-being (SO11) on the sites, are effectively neutralised by the fact that any potential odour issues will be addressed by the Environment Agency in the interests of protecting local amenity.

Table 38: Cumulative Impacts of sites W8 and L(i)17R

Site Ref.	Temp Effect	Sustainability Objectives (SO)												
		1	2	3	4	5	6	7	8	9	10	11	12	13
L(i)17R Newport Quarry	S / M	/	--	++	-	+	++	++	0	+	/	--	+	+
	L	/	--	++	/	0	/	0	0	0	0	/	0	0
W8 Elsenham	S / M	+	++	++	/	-	-	/	0	+	+	-	++	/
	L	+	++	++	/	-	-	/	0	+	+	/	++	/

- The sites of W8 and L(i)17R are unlikely to have many cumulative impacts, as can be seen above. It should be noted that, in the case of L(i)17R (Newport), the impacts highlighted for inert landfill have been explored for the purposes of this cumulative assessment.
- These sites have been explored as a cluster due to the uncertain transport impacts (SO10) associated with Newport and any subsequent implications this might have on the local road network which could affect the allocation at Elsenham. However, the development principles regarding Newport Quarry state that, 'a vehicle routing agreement is required to ensure the site is accessed via the existing access to Newport Quarry and via the Main Road network (and) consideration would need to be given at the planning application stage to the safe operation of the road bridge over the railway line west of the site access and the requirement for any additional traffic management.' With this in mind, no cumulative impacts have been identified for this objective.

8.3.3 Recommendations Regarding the Strategic Site Allocations

There are no recommendations to any of the Sites at this stage. Recommendations have been factored into the Plan at various stages of the SA and plan-making process. These are highlighted below:

- The sites of L(n)8R, L(n)7R and W32 are all in close proximity to each other, and share a lot of impacts as a result. It can be seen that, in addition to there being significant negative impacts on water quality (SO2) as a result of each allocation individually, there may be further cumulative negative impacts on this objective. The Plan however, recognises the shared impacts of these sites, and although grouped and allocated for different facility types within the Plan, looks at them as a suite of allocations. Each site has different development principles in Appendix B of the Plan that are closely linked and relevant to each specific use, but there will be shared common benefits. The need for a hydrological assessment for site L(n)8R ensures that water quality issues are addressed in terms of hazardous landfill operations in the area. Inert recycling at site W32 will have a lesser impact on water quality and has been raised due to the proximity of a water body and can be mitigated through the requirements of Policy 10, which includes added emphasis on potential water quality issues. It is therefore viewed that the recommendation has been sufficiently factored into the Plan, where effective measures to mitigate the impacts on water quality in the area will be sought and adequately addressed.
- The sites of W13, L(i)15 and L(i)5 have been grouped where they are located in a broadly

similar location, and also in regard to their possible impacts on biodiversity through the international designation that exists of the Colne Estuary (SPA, Ramsar). In addition to development principles for these sites stating that likely significant effects on the nearby international wildlife sites need to be considered, it should additionally be noted that the Plan, as per the recommendation of the HRA, states that 'planning permission for waste management development within or otherwise affecting an international site (Natura 2000 site) will only be granted where the conclusions of a project-level Habitats Regulations Assessment (HRA), as required for those proposals highlighted within the HRA of the Plan, demonstrate that the proposal will have no adverse impacts on the integrity of any site, either alone or in combination with other plans or projects.' Screening distances are also provided as a guide for potential applicants in relation to the triggers for project-level HRA. The inclusion of this requirement in the Plan will effectively determine whether any impacts on internationally designated sites are likely. Additionally, project-level HRA will also identify the impacts of proposals in combination with other relevant projects, plans and programmes within the Plan Area. As such there will be no cumulative impacts on biodiversity.

- In the SA of the Revised Preferred Approach (2015) it was recommended that mitigation measures should be incorporated where possible in a forthcoming site related policy post-consultation, due to significant negative impacts having been highlighted for health and well-being (SO11). This was associated with the loss of a PROW and proximity to properties at the W29 Bellhouse site. It should be noted that the development principles stated for this site in the Pre-Submission Plan include those related to hours of operation and noise standards. It should also be noted that the Environment Agency will also address any potential odour issues in the interests of protecting local amenity. It is considered at this stage that the recommendations of the SA have been successfully factored into the Plan.
- In the SA of the Revised Preferred Approach (2015) it was recommended that significant negative impacts associated with flooding (SO3) resulting from W7 Sandon, due to portions of the site being in Flood Zone 3 would require effective mitigation. This issue is sufficiently covered by the Plan's policies. Mitigation was also recommended for L(i)10R regarding the site's negative impact on well-being (SO11) resulting from its location to nearby properties. This has been addressed in the development principles for the site which state that dust mitigation measures, limits on duration (hours of operation) and noise standards (from noise sensitive properties) will be established in the interests of protecting local amenity. The approach taken by the WPAs to cover these issues in policy and development principles can be seen to have successfully factored in the recommendations of the Revised Preferred (2015) stage SA.
- At the Revised Preferred Approach (2015) stage, it was stated that a negative impact on well-being (SO11) will exist for IWMF2 due to the proximity of nearby properties, which will require mitigation. The development principles for the site, as listed in Appendix B of the Plan, state that dust mitigation measures, limits on duration (hours of operation) and noise standards (from noise sensitive properties) will be established in the interests of protecting local amenity. As a result, the recommendation of the AS has been successfully factored into the Plan.
- Site L(n)8R will have a negative impact on well-being (SO11) associated with a small number of properties within 250m of the site boundary. It was stated within the SA of the Revised Preferred Approach (2015) that this impact on sensitive receptors should be mitigated within any forthcoming site policy. It is considered that the development principles formulated for this site as stated in Appendix B of the Plan adequately address this recommendation.

9 Monitoring

The significant sustainability effects of implementing a Local Plan must be monitored in order to identify unforeseen adverse effects and to be able to undertake appropriate remedial action. The Sustainability Framework contained in Annex C accompanying this report contains suggested indicators in order to monitor each of the Sustainability Objectives, however these may not all be collected due to limited resources and difficulty in data availability or collection.

Guidance stipulates that it is not necessary to monitor everything included within the Sustainability Framework, but that monitoring should focus on significant sustainability effects, e.g. those that indicate a likely breach of international, national or local legislation, that may give rise to irreversible damage or where there is uncertainty and monitoring would enable preventative or mitigation measures to be taken.

Upon adoption the Plan will be accompanied by an Adoption Statement which will outline those monitoring indicators most appropriate for future monitoring of the Plan in line with Regulation 16 of the Environmental Assessment of Plans and Programmes Regulations 2004.

10 Next Steps – Consulting on the Sustainability Appraisal

This Environmental Report will be subject to consultation. There are three statutory consultees that are required to be consulted for all Sustainability Appraisal and Strategic Environmental Assessment documents. These are:

- The Environment Agency;
- Natural England; and
- English Heritage.

In addition to these, consultation will seek to engage the wider community in order to encompass comprehensive public engagement. Essex County Council and Southend-on-Sea Borough Council may additionally wish to invite comments from focussed groups, relevant stakeholders and interested parties.

All comments on the content of this Environmental Report should be sent to:

Minerals and Waste Planning
Policy Team
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Chelmsford
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CM1 1QH

Email: mineralsandwastepolicy@essex.gov.uk

Telephone: 03330 139 808

Comments can also be made in the relevant section of the Council's consultation portal:

<http://consult.essexcc.gov.uk/portal/>.

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