

Essex and Southend Replacement Waste Local Plan

Sustainability Appraisal and Strategic Environmental Assessment

Environmental Report: Non-Technical Summary

The Sustainability Appraisal (SA) for the Essex and Southend Replacement Waste Local Plan Proposed Submission Document (RWLP) is being prepared and will inform the Plan in due course under the delegated authority of the Director for Place and the Portfolio Holder for Planning, Housing and Regulatory Services in accordance with a recommendation set out in the RWLP Cabinet Report.

The SA prepared for the previous version of the RWLP (June 2015) will accompany the Plan at SBC Cabinet on 5th January 2016. Although this version of the SA does not include reference to the some amendments to the site allocations and the new 'Area of Search', considered in the Submission version of the RWLP and referred to in the Cabinet Report, it still provides an appropriate appraisal and helpful analysis of the spatial approach and overall strategy for waste management in Essex and Southend.

The revised Sustainability Appraisal of the RWLP Proposed Submission Document will accompany the RWLP at Southend-on-Sea Borough Council Full Council on 25th February 2015.

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: Revised Preferred Approach (RPA)
2015**

Sustainability Appraisal and Strategic Environmental Assessment

Environmental Report: Non-Technical Summary

June 2015

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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

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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
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: Revised Preferred Approach (RPA) 2015.

1.1 The Waste Local Plan: Revised Preferred Approach (RPA) 2015

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 Revised Preferred Approach (RPA) document for public consultation.

The RPA builds on the WPAs' previous progress towards a Waste Development Document (WDD), incorporating a strategy, site allocations and policies, under the previous planning system. The change from a WDD to a WLP brings the document in line with current planning policy terminology, although the components of the plan are the same. The WLP contains:

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

1.2 Sustainability Appraisal / Strategic Environmental Assessment

The requirement for Sustainability Appraisal (SA) and Strategic Environmental Assessment (SEA) comes from a high level national and international commitment to sustainable development. Sustainable development is:

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

The aim of the SEA is to identify potentially significant environmental effects created as a result of the implementation of the Waste Local Plan 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'*.

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.

1.3 Background

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. The Environmental Report to which this document summarises responds to Stages B and C of the Sustainability Appraisal process. The stages are, and incorporate:

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

2 Sustainability Context, Baseline and Objectives

2.1 Introduction

The following section outlines the key findings of the Scoping Report (Stage A in the process) which includes an outline of the plans and programmes, the baseline information profile for the Plan Area, together with Sustainability Objectives. For information, Annex C to the Environmental Report sets out the detailed Sustainability Appraisal Framework and the Site Pro forma formulated through Stage A.

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 at an early stage which are likely to influence the Plan. Local supporting documents which form the evidence base of the Plan have also been included within this list as they will significantly shape policies and decisions in the Plan Area.

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
Local Waste Arisings: Addendum to the Replacement Waste Local Plan Capacity Gap Report 2014
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
Basildon Core Strategy Preferred Options Stage DPD District Local Plan Saved Policies (Sep 2007)
Braintree District Core Strategy (Sep 2011)
Adopted Brentwood Replacement Local Plan (Aug 2005) + Saved Policy Direction Aug 2008
Castle Point Local Plan Saved Policies (Sep 2007)
Chelmsford Core Strategy and Development Control Policies DPD (Feb 2008, adopted Dec 2013)
Colchester Local Development Framework Core Strategy (Dec 2008, amended Jul 2014)
Epping Forest Combined Local Plan (1998) and Alterations (2006) Policy Document (Feb 2008)
Adopted Replacement Harlow Local Plan (Jul 2006) + Saved Policy Direction
Maldon District Replacement Local Plan And Saved Policies (Nov 2008)
Rochford Core Strategy (Dec 2011)
Tendring District Local Plan (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, Key Sustainability Issues and Problems and Sustainability Objectives (Stages A2 and 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. These 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 baseline information.

The appraisal will then be able to evaluate the nature and degree of impact and whether significant effects are likely to emerge from the Plan. The following table outlines the information which has led to the formulation of the Sustainability Objectives.

Table 3: Baseline Information and Key Sustainability Issues and Problems

Key Issues	Description / Supporting Evidence	State of environment in absence of 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.	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		

Key Issues	Description / Supporting Evidence	State of environment in absence of Plan	Sustainability Objective (SO)
	<p>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.</p>		
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.</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.</p>	
Flood risk	<p>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.</p>	<p>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. Without the Plan, the level of detail used to inform decisions of a strategic nature would not be as robust, especially</p>	3) To minimise the risk and impact of flooding.
	<p>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.</p>		

Key Issues	Description / Supporting Evidence	State of environment in absence of Plan	Sustainability Objective (SO)
	Significant levels of flood risk have been identified along the Essex coast and inland along river stretches.	regarding cumulative impacts. In addition, policy content can be used to set conditions on developments, or determine their refusal in areas of flood risk.	
	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 protection of the quality of agricultural land has protection within the NPPF, however for economic reasons only. The Plan would be the predominant document in which to protect the wider sustainability aspects of such land from unsuitable waste related development.	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.		
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	5) To conserve and enhance the historic environment, heritage assets and their settings

Key Issues	Description / Supporting Evidence	State of environment in absence of Plan	Sustainability Objective (SO)
	<p>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.</p>	<p>historic environment specialists on a site-by-site basis and the best outcomes in light of all alternatives.</p>	
<p>The known archaeological resource in the Plan Area is very varied and highly significant; approximately 37,240 records of archaeological sites and finds.</p>			
<p>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.</p>			
<p>Protecting important designated and locally significant landscapes</p>	<p>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.</p>	<p>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 and the best outcomes in light of all alternatives.</p>	<p>6) To minimise the impact on landscape and townscape character.</p>
<p>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.</p>			
<p>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.</p>			
<p>Transport related air quality issues in key areas</p>	<p>Air quality in Essex is generally good. Most industrial processes in Essex are concentrated along the Thames Estuary.</p>	<p>Without adequate policy protection, it is conceivable that facilities might be located in</p>	<p>7) To protect air quality in the Plan area.</p>

Key Issues	Description / Supporting Evidence	State of environment in absence of Plan	Sustainability Objective (SO)
	<p>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.</p> <p>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.</p>	unsuitable areas in relation to AQMAs.	
Energy consumption from transport	<p>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.</p> <p>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.</p>	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.
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. None of these are Energy from Waste facilities.	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

Key Issues	Description / Supporting Evidence	State of environment in absence of Plan	Sustainability Objective (SO)
Addressing capacity deficits in relevant waste streams	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.		waste landfilled and to maximise the re-use, recovery and recycling of waste.
	At present, there are no energy recovery facilities either operational or under construction although there are two with planning permission at Rivenhall and Stanway.		
	There is a significant capacity deficit in biological treatment capacity for the management of organic waste.		
	There is a deficit of inert (CD&E) waste recycling capacity when compared with the estimated plan area arisings. The outlook is further worsened when the estimated amount of inert (CD&E) waste imported from London is added to the potential plan area arisings.		
The capacities of strategic routes	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.	The Plan should seek the correct allocations to reduce waste miles whilst also exploring the validity of sustainable transportation; neither of which could be managed on a strategic scale without the Plan.	10) To promote the sustainable transport of waste and materials within Essex and Southend where viable, and to ensure safe highways access where necessary.
Reducing waste miles	Long distance waste travel occurs where larger or specialist facilities are required for that waste type.		

Key Issues	Description / Supporting Evidence	State of environment in absence of Plan	Sustainability Objective (SO)
Importing London waste	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 inside their Plan Area by 2016.		
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 given in less sustainable locations. Similarly there would be no assessment of cumulative impacts across the Plan Area.	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.	

Key Issues	Description / Supporting Evidence	State of environment in absence of Plan	Sustainability Objective (SO)
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.	

2.3.1 The Appraisal of Policies

The SA of the Plan appraises the document's policies / preferred approaches against the Sustainability Objectives (SOs) outlined above in the right hand column and within the detailed SA Framework in Annex C. The aim is to assess the sustainability effects of the Plan should it be implemented. 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 provide mitigation measures where appropriate. The findings will be accompanied by an appraisal matrix which will document the effects over time.

For clarity, within the Environmental Report and in this 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 / preferred approach 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.

2.3.2 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.

2.3.3 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.

2.3.4 Description of ‘Alternatives Considered’

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

2.3.5 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 Core Strategy

3.1 The Proposed 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	/	/	/	+	/	/	/	/	++	++	/	/	++

3.1.1 Significant and Cumulative Effects

- The Vision focuses on waste management, and as such the only significant effect will be realised for Sustainability Objective 9 (defines 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 element 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.

3.1.2 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 as the issue is not directly relevant to environmental or amenity concerns.

3.2 The Preferred Approaches (Excluding Strategic Allocations)

3.2.1 Significant and Cumulative Effects

	Sustainability Objectives (SO)												
	1	2	3	4	5	6	7	8	9	10	11	12	13
PA1	0	0	0	0	0	0	0	0	++	0	0	0	0
PA2	/	/	/	+	/	/	/	+	++	+	+	+	+
PA10	++	+	+	++	+	++	0	0	++	0	+	0	++
PA11	0	/	0	+	0	0	/	0	++	+	0	0	/
PA12	0	0	0	++	0	0	/	++	++	++	0	+	+
PA13	0	0	0	++	0	0	/	0	++	++	0	+	+
PA14	0	0	0	++	0	0	0	0	++	++	0	0	+
PA15	+	0	0	++	0	++	0	++	++	+	+	0	0
PA16	0	++	++	0	/	/	++	++	+	++	+	0	0
PA17	0	0	0	0	0	0	+	0	0	++	0	+	0
PA18	+	0	0	+	++	++	/	0	0	0	++	++	++
PA19	+	+	0	0	0	0	0	+	+	0	+	0	+

- The Preferred Approach has been assessed as having no direct impacts on the majority of the Sustainability Objectives. This is due to those impacts that may theoretically occur from the Approach'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 Preferred Approach 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 and in those Preferred Approaches that specify the locational criteria for facility types. The Preferred Approach 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 Preferred Approach is flexible in adapting to possible changes over the Plan period and has been formulated in line with national guidance, requirements and the principles of the Waste Hierarchy. Provision of slightly more land than is forecast to be necessary gives the market sufficient flexibility to choose the most appropriate sites for the management of the listed waste streams. The approach, in regarding the upper forecasted amounts, allows for the possible implications of household growth from calculating objectively assessed need, the fact that there are few adopted District-level Local Plans in the Plan Area and also the

implications of 'planning by appeal'. 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.

- Preferred Approach 2 will have a significant positive impact on SO9 regarding the sustainable management of waste. In addition, the safeguarding of those sites essential for delivery of the Joint Municipal Waste Management Strategy adds further positive impacts. The approach 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 high (strategic) level.
- Preferred Approach 10 will have positive impacts on biodiversity (SO1), the sustainable use of 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. This would also see positive impacts on economic growth (SO13) through the approach's acknowledgement of the need for material for infrastructure projects.
- Preferred Approach 11 will have significant positive impacts on the sustainable management of waste (SO9) through the approach of designating Areas of Search around suitable B2 and / or B8 (broadly industrial) land as defined in the Local Plans of the districts, boroughs and the City in the Plan Area. This allows flexibility within the Plan period to provide sufficient facilities but also in any instances where it can be justified that a direct site allocation is not suitable, through an expectation that the potential for facilities to be bought forward on Areas of Search is assessed prior to other locations being submitted. 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. 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, Air Quality Management Areas [AQMAs]) do not exist in the Areas of Search Methodology and Assessment document; however it should be acknowledged that the report does not seek to allocate any new sites beyond those already existing or allocated in district-level Local Plans. There will also be uncertain impacts on economic growth and employment opportunities (SO13) where the possible eventual development of B2 or B8 land for waste management facilities may be done so to the detriment of any alternative identified employment need in specific sectors and areas. Equally however, waste infrastructure supports other employment uses and could give rise to increased employment opportunities itself.
- Preferred Approach 12 will have significant positive impacts on the sustainable use of land (SO4) and transport (SO10) through co-location and a focus on brownfield (previously developed) land; energy (SO8) through an enhanced focus on CHP (creating energy from waste); and the sustainable management of waste (SO9) through the assessment of sites on their individual merits in line with changing needs. 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. This is also the case for Preferred Approach 13.
- Preferred Approach 14 will have significant positive impacts associated with the sustainable use of land (SO4) and the sustainable management of waste (SO9) through the criterion of facilities only being acceptable within the Nuclear Licensed Areas at Bradwell and the approach to plan for the waste of possible future generation of nuclear power at Bradwell as a Nationally Significant Infrastructure Project (beyond the remit or influence of the RWLP

and the WPA). 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.

- Preferred Approach 15 will have significantly positive impacts on the sustainable management of waste (SO9) through the approach's criteria 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 (after minerals extraction). Further significant positive impacts will be realised on energy (SO8) where applicants would have to demonstrate how the proposed scheme would include capture of landfill gas for recovery of energy by the most efficient methods, where practicable, and have given consideration to the ability to connect to a district heat network or for converting recovered gas for injection to the gas pipeline network.
- Preferred Approach 16 will have significant positive impacts on water quality (SO2) where proposals for new waste management facilities should incorporate water efficient design measures. As well as aiming to ensure that emissions are reduced, there will be significant positive impacts on flood risk (SO3). There will be significant positive impacts 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 energy (SO8) through proposals setting out how they support opportunities for decentralised and renewable or low-carbon energy supply, as well as a requirement to minimise carbon emissions through energy efficient design measures. 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. 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. Despite this, negative impacts are unlikely to occur as a result of the wider strategy and are effectively neutralised by the criteria of Preferred Approach 18.
- Preferred Approach 17 will have significant positive impacts on transport (SO10) through seeking opportunities for the transportation of waste by rail or water in the first instance. The Plan acknowledges that the use of rail or water in transporting waste may result in an increase in the distance waste travels as these are cheaper modes of transport based on volume. This increase in waste miles via rail or wharf transshipment facilities may result in more cross boundary movements with more facilities utilised for waste arising outside of the Plan Area, 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.
- Preferred Approach 18 will have significant positive impacts on the historic environment (SO5) where waste management development proposals will only be acceptable where they avoid unacceptable impacts on historic, archaeological or cultural sites/assets and their setting. Further significant positive impacts will be realised regarding landscape character (SO6) where waste management development proposals will only be acceptable where they avoid unacceptable impacts on countryside, including landscape and visual impacts. There will be significant positive impacts on health (SO11) where waste management development proposals will be required to avoid unacceptable impacts on

public open space and Public Rights of Way. Further significant impacts will be realised for public nuisance and access (SO12) through avoiding unacceptable impacts on general amenity of neighbouring occupiers, in particular as a result of noise, odour, visual impacts (including light pollution), dust or vibration resulting from facilities or associated HGV movements. Economic factors (SO13) will also experience significantly positive impacts where the maximisation of employment generation will be sought. There will be an uncertain impact on air quality (SO7). Although associated factors are considered regarding transport movements, air quality issues related to these are not directly covered through this Preferred Approach. There will therefore be uncertain impacts on this objective where impacts on AQMAs are not listed as a consideration.

- Preferred Approach 19 will have no significant impacts on any of the Sustainability Objectives. 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.

3.2.2 Recommendations Regarding the Preferred Approaches (Excluding Strategic Allocations)

- It is recommended that Preferred Approach 18 be expanded to reflect the possibility of impacts on Natura 2000 sites in line with the findings of the Habitats Regulation Assessment (HRA). The policy could be more specific as to the possible requirements of the developer to, in accompaniment to any planning application, undertake Appropriate Assessment (AA) to ascertain the implications of development on such designations and in accumulation with other developments, plans and programmes in the Plan Area.

4 Strategic Site Allocations

4.1 Local Authority Collected Waste (LACW)

After prevention and re-use, recycling and recovery are the next preferable options for managing waste and diverting it from landfill. This is reflective of the Waste Hierarchy which governs the provision of waste management facilities. Given its significant contribution to meeting the capacity requirements for recycling and recovery, the Integrated Waste Management Facility (IWWMF) site with planning permission will be safeguarded as well as allocated to ensure its continued contribution to the recycling and recovery of waste. In addition, six LACW transfer stations are needed.

4.1.1 Preferred Approach 3: Strategic Site Allocations - Local Authority Collected Waste

To allocate the sites considered essential for ongoing operations associated with the management of LACW. This would ensure their continued contribution, and if needed re-configuration or intensification, throughout the Plan period, subject to compliance with other policies in the Plan.

The preferred sites to be allocated are set out in the Site Assessment & Allocations Report, which supports this Revised Preferred Approach Document and describes the site assessment process.

4.1.2 Significant Effects of Preferred Sites

Sites for: LACW														
Site Ref.	Temp Effect	Sustainability Objectives (SO)												
		1	2	3	4	5	6	7	8	9	10	11	12	13
IWWMF3 – Tovi EcoPark	S / M	+	++	--	++	++	/	++	0	++	+	-	++	++
	L	+	++	--	++	++	/	++	0	++	+	/	++	++
W10 Harlow	S / M	++	++	++	++	++	++	++	0	++	+	-	++	+
	L	++	++	++	++	++	++	++	0	++	+	/	++	+
W26 Winsford Way	S / M	+	++	++	++	++	/	++	0	++	+	-	++	++
	L	+	++	++	++	++	/	++	0	++	+	/	++	++
W16 Southend	S / M	++	++	++	++	++	++	++	0	++	/	-	/	++
	L	++	++	++	++	++	++	++	0	++	/	/	/	++
W9 Great Dunmow	S / M	++	-	++	++	++	+	++	0	++	+	-	++	/
	L	++	-	++	++	++	+	++	0	++	+	/	++	/

W34 Cordons Farm	S / M	+	++	++	++	++	/	++	0	++	+	-	++	+
	L	+	++	++	++	++	/	++	0	++	+	/	++	+
W33 Ardleigh	S / M	+	++	++	--	/	/	++	0	++	+	-	++	++
	L	+	++	++	--	/	/	++	0	++	+	/	++	++

- There will be predominantly positive impacts resulting from the allocation of the above sites. Concentrating on the transfer sites (those apart from the IWMF) it can be seen that there are positive impacts on the transportation of waste (SO10) and also air quality (SO7) associated with their distribution. In addition, there will be largely positive impacts on employment growth (SO13) associated with their proximity to key centres of growth, or otherwise identified towns within the Plan Area. The distribution of the transfer sites can also be seen to accord with the Overall Spatial Strategy, being dispersed across the Plan Area without compromising the notions of the proximity principle.
- For this reason, there will however also be minor negative impacts associated with general well-being (SO11), with each site being within 250m of at least one property or sensitive receptor. With this in mind it is recommended that Plan policy seek to mitigate these impacts through effective screening where necessary.
- There will also be a number of uncertain or moderate impacts on landscape (SO6) through the allocation of the above sites. It is similarly recommended that policy seeks to minimise these impacts on a case-by-case basis.
- Significantly negative impacts have been assessed for the Basildon (Tovi EcoPark) IWMF regarding flooding (SO3), specifically a proportion of the site being in Flood Zone 3. It should be noted however that the building has already been constructed with appropriate flood mitigation measures.
- Significant negative impacts also exist regarding site W33 in Ardleigh where a significant proportion of the site is classed as Grade 1 agricultural land (SO4).

4.1.3 Secondary, Cumulative and Synergistic Effects

- The distribution of the sites, in accordance with the Spatial Strategy will mean that there will be no significant secondary, cumulative or synergistic effects resulting from the allocations of these sites associated with the management of LACW. Despite this, there may be some small negative impacts associated with numerous moderate impacts on landscape (SO6) positioned on strategic routes and in close proximity to key centres for growth / towns within the Plan Area.

4.1.4 Proposed Mitigation Measures / Recommendations

- It is recommended that Plan policy seek to mitigate the impacts of sites being in close proximity to sensitive receptors, through effective screening where necessary. There will also be a number of uncertain or moderate impacts on landscape (SO6) through the allocation of the transfer sites. It is similarly recommended that policy seeks to minimise these impacts on a case-by-case basis.

4.1.5 Alternatives Considered

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:		Not needed for use as a Transfer Station. Has been allocated in the Plan for another use.												
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:		Not needed for use as a Transfer Station. Has been allocated in the Plan for another use.												
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.												

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.												
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:		Not needed for use as a Transfer Station. Has been allocated in the Plan for another use.												
SIE5	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.												
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
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.												
W7	S / M	+	-	--	/	/	+	++	0	++	/	/	+	++

	L	+	-	--	/	/	+	++	0	++	/	/	+	++
Reason for rejection:		No new MBT has been deemed necessary to allocate within the Plan beyond the operating IWMF at Tovi Eco Park (Basildon). The site is however allocated for another use.												
W8	S / M	+	++	++	/	/	-	/	0	+	+	-	++	/
	L	+	++	++	/	/	-	/	0	+	+	/	++	/
Reason for rejection:		Not allocated for use as MBT. Has been allocated in the Plan for another use.												
W29	S / M	/	-	++	++	+	+	/	0	++	+	--	++	++
	L	/	-	++	++	+	+	/	0	++	+	/	++	++
Reason for rejection:		No new MBT has been deemed necessary to allocate within the Plan beyond the operating IWMF at Tovi Eco Park (Basildon). The site is however allocated for another use.												
W32	S / M	/	-	--	-	/	-	/	0	++	+	/	++	+
	L	/	-	--	-	/	-	/	0	++	+	/	++	+
Reason for rejection:		Not as sustainable, and did not score as highly as other sites considered for allocation in the Waste Site Assessment Report.												
SIE5	S / M	+	++	++	++	++	+	/	0	++	+	++	++	++
	L	+	++	++	++	++	+	/	0	++	+	/	++	++
Reason for rejection:		No new MBT has been deemed necessary to allocate within the Plan beyond the operating IWMF at Tovi Eco Park (Basildon). The site is however allocated for another use.												

4.2 Biological Treatment

Biological treatment involves the harnessing of micro-organisms to break down organic waste. Such waste can include food waste, green waste and paper waste. The products of biological treatment are typically useful, with all biological treatment facilities producing a compost type material or soil improver.

Composting facilities break down the organic waste aerobically (in the presence of oxygen). In the case of anaerobic digestion, this process takes place anaerobically (without oxygen), and along with a composting material, produces biogas which can be used to generate heat and electricity.

The following waste management facility types are considered to contribute to the biological treatment of waste:

- In-Vessel Composting facilities (enclosed);
- Open windrow composting facilities (outdoor); and
- Anaerobic digestion (AD).

4.2.1 Preferred Approach 4: Strategic Site Allocations - Biological Treatment

To allocate sites considered suitable for the development of built waste management facilities for the biological treatment of waste to meet the identified shortfall in biological treatment capacity.

The preferred sites to be allocated are set out in the Site Assessment & Methodology Report, which supports this Revised Preferred Approach Document.

In addition, proposals for new biological treatment facilities which come forward on non-allocated sites would have to demonstrate their compliance with the relevant locational criteria. It will also have to be shown why they are more suitable than the allocated sites (with reference to the same site assessment criteria and method used for selecting the allocated sites, as set out in the Site Assessment & Methodology Report).

4.2.2 Significant Effects of Preferred Sites

Sites for: BIOLOGICAL TREATMENT														
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	++	+	/	+	++
SIE5 Basket Works	S / M	+	++	++	++	++	+	/	0	++	+	++	++	++
	L	+	++	++	++	++	+	/	0	++	+	/	++	++
W13 Wivenhoe Quarry	S / M	/	-	++	-	++	/	/	/	++	/	--	+	++
	L	/	-	++	-	++	/	/	/	++	/	/	+	++
W7 Sandon East	S / M	+	-	--	/	/	+	++	0	++	/	/	+	++
	L	+	-	--	/	/	+	++	0	++	/	/	+	++

- As can be seen from SO13, regarding economic growth and employment opportunities associated with proximity to key centres for growth, the Preferred sites are well located. Significant positive impacts have also been predicted for the sustainable management of waste (SO9) through the positive planning history associated with the sites.
- Significant negative impacts have been highlighted for objectives on a few of the preferred 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, which will need mitigation where possible through any forthcoming site related policy post-consultation. This is also the case for the W13 site at Wivenhoe Quarry. Significant negative impacts also exist on the W7 Sandon site regarding flooding (SO3) due to part of the site lying within Flood Risk Zone 3.

4.2.3 Secondary, Cumulative and Synergistic Effects

- The concentration of sites within the Borough of Colchester could give rise to cumulative effects resulting from the allocation of sites W13, W29 and SIE5. Despite this, there are unlikely to be any significant impacts through the identification of the impacts highlighted above. Although negative impacts on water quality (SO2) are highlighted for allocations W13 and W29, these are for localised issues associated with adjacent water bodies that

have no identified connection.

4.2.4 Proposed Mitigation Measures / Recommendations

- Significant negative impacts have been highlighted for health and well-being (SO11) associated with the loss of a PROW and proximity to properties at the W29 Bellhouse site, which will need mitigation where possible through any forthcoming site related policy post-consultation. This is also the case for the W13 site at Wivenhoe Quarry.

4.2.5 Alternatives Considered

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
W8	S / M	+	++	++	/	/	-	/	0	+	+	-	++	/
	L	+	++	++	/	/	-	/	0	+	+	/	++	/
Reason for rejection:		Not allocated for use as IVC. Has been allocated in the Plan for another use.												
W21	S / M	+	-	--	/	+	--	++	0	+	+	--	++	++
	L	+	-	--	/	+	--	++	0	+	+	/	++	++
Reason for rejection:		The site is within the Greenbelt.												
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 as sustainable, and did not score as highly as other sites considered for allocation in the Waste Site Assessment Report.												
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
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.												
W8	S / M	/	++	++	/	-	-	/	/	+	+	-	++	/
	L	/	++	++	/	-	-	/	/	+	+	/	++	/
Reason for rejection:		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.												
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.												
W21	S / M	/	-	--	/	+	--	++	/	+	+	--	++	++
	L	/	-	--	/	+	--	++	/	+	+	/	++	++
Reason for rejection:		The site is within the Greenbelt.												
W31	S / M	/	++	++	/	/	-	/	/	+	+	-	++	++
	L	/	++	++	/	/	-	/	/	+	+	/	++	++
Reason for rejection:		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.												
W32	S / M	/	-	--	-	/	-	/	/	++	+	/	++	+
	L	/	-	--	-	/	-	/	/	++	+	/	++	+
Reason for rejection:		Not as sustainable, and did not score as highly as other sites considered for allocation in the Waste Site Assessment Report.												
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
W8	S / M	+	++	++	/	/	-	/	0	+	+	-	++	/
	L	+	++	++	/	/	-	/	0	+	+	/	++	/

Reason for rejection:		Not allocated for use for open windrow composting as preferred use was for inert recycling. Has been allocated in the Plan for inert recycling.												
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		The site is not considered to be suitable in Highway Terms and/or does not comply with Transport Policy.												
W30	S / M	-	-	--	/	+	--	/	0	++	+	-	++	++
	L	-	-	--	/	+	--	/	0	++	+	/	++	++
Reason for rejection:		The site is within the Greenbelt.												

4.3 Inert Waste & Recycling

Construction, Demolition and Excavation waste can be processed and reused as a construction material. Due to the fact that this waste can be processed and reutilised for its original use, it falls under the '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.

4.3.1 Preferred Approach 5: Strategic Site Allocations - Inert Waste Recycling

To allocate sites considered suitable for the recycling of inert waste which contribute to meeting the identified shortfall in inert recycling capacity, once sufficient allocations have been made to meet the forecasted need for biological treatment.

The preferred sites to be allocated are set out in the Sites Assessment & Methodology Report, which supports this Revised Preferred Approach Document.

In addition, proposals for new inert waste recycling which come forward on non-allocated sites would have to demonstrate their compliance with the relevant locational criteria. It will also have to be shown why they are more suitable than the allocated sites (with reference to the same site assessment criteria and method used for selecting the allocated sites, as set out in the Site Assessment & Methodology Report).

4.3.2 Significant Effects of Preferred Sites

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
L(i)10R Blackleys (Site 1)	S / M	+	-	++	++	+	/	++	0	+	+	--	++	++
	L	+	-	++	++	+	/	++	0	+	+	/	++	++
L(n)7R Little Bullocks A22	S / M	/	-	--	++	/	/	/	0	++	+	/	++	/
	L	/	-	--	++	/	/	/	0	++	+	/	++	/
L(n)1R Slough Farm	S / M	+	-	++	++	/	/	++	0	+	/	-	+	++
	L	+	-	++	++	/	/	++	0	+	/	/	+	++
W7 Sandon East	S / M	+	-	--	/	+	+	++	0	++	/	/	+	++
	L	+	-	--	/	+	+	++	0	++	/	/	+	++
W8 Elsenham	S / M	+	++	++	/	/	-	/	0	+	+	-	++	/
	L	+	++	++	/	/	-	/	0	+	+	/	++	/
W19 London Road	S / M	+	++	++	-	++	--	++	0	+	+	-	++	++
	L	+	++	++	-	++	--	++	0	+	+	/	++	++
W31 Morses Lane	S / M	+	++	++	/	/	/	/	0	+	+	-	++	++
	L	+	++	++	/	/	/	/	0	+	+	/	++	++

- There will be positive impacts realised for all 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 those sites L(n)7R at Little Bullocks Farm and W7 at Sandon. These are due to portions of the sites being in Flood Zone 3 and effective mitigation will be required. There will also be a significantly negative impact on landscape (SO6) due to W19 being located within the Green Belt. The site L(i)10R will also have a negative impact on well-being (SO11) resulting from its location to nearby properties which is likely to require mitigation, and also health (also SO11) associated with the loss of a PROW. Combined this has resulted in a significantly negative impact being predicted for this Sustainability Objective.

4.3.3 Secondary, Cumulative and Synergistic Effects

- The concentration of sites within the District of Uttlesford could give rise to negative cumulative effects on landscape (SO6) resulting from the allocation of sites L(n)7R and W8. These impacts are unlikely to be significant however, and can be addressed through mitigation on a site-by-site basis.

4.3.4 Proposed Mitigation Measures / Recommendations

- There will be significant negative impacts associated with flooding (SO3) resulting from those sites L(n)7R at Little Bullocks Farm and W7 at Sandon. These are due to portions of the sites being in Flood Zone 3 and effective mitigation will be required.
- The site L(i)10R will also have a negative impact on well-being (SO11) resulting from its location to nearby properties which is likely to require mitigation.
- The concentration of sites within the District of Uttlesford could give rise to negative cumulative effects on landscape (SO6) resulting from the allocation of sites L(n)7R and W8. These impacts are unlikely to be significant however, and can be addressed through mitigation on a site-by-site basis.

4.3.5 Alternatives Considered

Sites for: CONSTRUCTION, DEMOLITION AND EXCAVATION (CD&EW) RECYCLING FACILITIES (OR 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	++	+	/	++	++
Reason for rejection:		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.												
L(n)6R	S / M	-	-	--	++	+	--	/	0	++	+	-	++	++
	L	-	-	--	++	+	--	/	0	++	+	/	++	++
Reason for rejection		The site is within the Green Belt.												

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L(n)8R	S / M	/	-	++	++	+	/	/	0	++	+	--	++	/
	L	/	-	++	++	+	/	/	0	++	+	/	++	/
Reason for rejection:		The WPAs do not consider that this site would be capable of operating independently with other sites at Crumps Farm / Little Bullocks Farm as have been allocated. The site has however been allocated in the Plan for another use.												
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:		Not allocated for inert recycling as preferred use was for biological treatment. Has been allocated in the Plan for biological treatment.												
W13	S / M	/	-	++	++	++	++	/	0	++	/	--	+	++
	L	/	-	++	++	++	++	/	0	++	/	/	+	++
Reason for rejection:		Not allocated for inert recycling as preferred use was for biological treatment. Has been allocated in the Plan for biological treatment.												
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:		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.												
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 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.												
W32	S / M	/	-	--	-	/	-	/	0	++	+	/	++	+
	L	/	-	--	-	/	-	/	0	++	+	/	++	+
Reason for rejection:		The WPAs do not consider that this site would be capable of operating independently with other sites at Crumps Farm / Little Bullocks Farm as have been allocated.												
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:		Not allocated for inert recycling as preferred use was for biological treatment. Has been allocated in the Plan for biological treatment.												

4.4 Opportunity Sites: Additional Capacity for Built Waste

In accordance with the Local Plan's Vision and Strategic Objectives, all waste should be managed as high up the waste hierarchy as possible. It is intended that a number of sites are allocated as reserve sites which could provide opportunities for additional waste management capacity to increase diversion of waste from landfill.

The sites below are judged to be suitable for waste management purposes, but were not required to meet the identified needs of the Plan area. In recognition of the value of these sites to divert waste away from landfill the Plan's preferred approach is to allocate such sites.

4.4.1 Preferred Approach 6: Opportunity Site Allocations - Additional Built Waste Management Facilities

To allocate reserve sites to support the opportunity to divert waste away from landfill. In the case of such sites, the principle of waste management facilities is supported, however, planning permission is subject to the demonstration of their ability to deliver the overarching vision of the Plan as well as all other relevant policies within this Plan.

The preferred sites to be allocated are set out in the Site Assessment & Methodology Report, which supports this Revised Preferred Approach Document.

4.4.2 Significant Effects

Sites for: OPPORTUNITY SITES														
Site Ref.	Temp Effect	Sustainability Objectives (SO)												
		1	2	3	4	5	6	7	8	9	10	11	12	13
W22 Michelins Farm	S / M	+	-	++	/	/	+	++	0	+	/	-	+	++
	L	+	-	++	/	/	+	++	0	+	/	/	+	++
IWMF2 Rivenhall	S / M	+	++	--	-	+	-	++	++	++	+	--	++	/
	L	+	++	--	-	+	-	++	++	++	+	/	++	/

- There will be significant positive effects on air quality (SO7), energy generation (SO8), the sustainable management of waste (SO9) and employment opportunities (SO13) resulting from the allocation of the above opportunity sites. The sites are also largely positive for minimising the impacts on health and well-being (SO12) and in the case of the IWMF at Rivenhall also water quality (SO2).
- There will however be significant negative impacts on flooding (SO3) associated with the IWMF being located in Flood Zone 3 and this will require mitigation to reduce the risk on and off site as a result. A negative impact on well-being (SO11) will also exist for the IWMF due to the proximity of nearby properties, which will require mitigation, and health (SO11) due to the loss of a PROW.
- Minor negative impacts exist for both sites, regarding water quality (SO2) for W22 due to the proximity to a water body, and landscape (SO6) and greenfield / agricultural land (SO4)

for IWMF2 due to sensitivity to change.

4.4.3 Secondary, Cumulative and Synergistic Effects

- There will be no secondary, cumulative or synergistic impacts resulting from these two sites due to the distance between them.

4.4.4 Proposed Mitigation Measures / Recommendations

- There will be significant negative impacts on flooding (SO3) associated with IWMF2 being located in Flood Zone 3 and this will require mitigation measures to reduce the risk on and off site as a result.
- A negative impact on well-being (SO11) will also exist for IWMF2 due to the proximity of nearby properties, which will require mitigation.

4.4.5 Alternatives Considered

- As Opportunity Sites, these allocations represent those sites that were not allocated for a specific use, but scored highly against other sites, in consideration also of their suitability to meet the capacity gap requirements and conformity to the general principles of the Spatial Strategy and the proximity principle. As such, there are no direct alternatives and all non-allocated sites can be considered alternatives.

4.5 Waste Disposal

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.

Although the Plan makes provision for increasing amounts of waste to be diverted from landfill, there continues to be a need for some landfill capacity to dispose of waste. Waste disposal covers three distinct waste streams:

- Inert Waste;
- Non-Hazardous Waste; and
- Hazardous Waste.

4.5.1 Preferred Approach 7: Strategic Site Allocations - Inert Landfill

To allocate sufficient sites considered suitable for the landfilling of inert waste to meet the identified shortfall in inert recycling capacity.

At allocated sites in the Mineral Local Plan 2014, the need for landfill capacity is considered to supersede considerations for low-level restoration.

The preferred sites to be allocated are set out in the Sites Assessment & Methodology Report, which supports this Revised Preferred Approach Document.

In addition, proposals for new inert landfilling which come forward on non-allocated sites would have to demonstrate their compliance with the relevant locational criteria. It will also have to be shown why they are more suitable than the allocated sites (with reference to the same site assessment criteria and method used for selecting the allocated sites, as set out in the Site Assessment & Methodology Report).

4.5.2 Significant Effects of Preferred Sites

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(i)10 Blackley (Site 1)	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
L(n)1R Ardleigh	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

- 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 will also have a significantly negative impact on well-being (SO11) due to sensitive receptors being within 250m of the site. 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. The Site Assessment Report states that the site would be unsuitable for landfill if the Sequential and Exception Tests cannot be met and significant flood protection/mitigation measures employed and this recommendation is extended within this report.

4.5.3 Secondary, Cumulative and Synergistic Effects

- The spatial distribution of the Preferred Sites general conforms well with notions of dispersal and the Spatial Strategy, and also in regards to the proximity principle. There are two sites, L(n)1R (Ardleigh) and L(i)5 (Sunnymead) in the District of Tendring which could be perceived as having cumulative negative impacts due to their comparative close proximity to each other. Despite this, none of the negative impacts associated with either sites are shared, beyond the localised, separate instances of impacts on water quality (SO2). Uncertain impacts surround each site regarding transport (SO10), however again there is no cumulative impact resulting from the conditions on each site.

4.5.4 Proposed Mitigation Measures / Recommendations

- Each site has been assessed as having a significantly negative impact on well-being (SO11) due to sensitive receptors being within 250m of the 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 that future potential impacts be mitigated. 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. The Site Assessment Report states that the site would be unsuitable for landfill if the Sequential and Exception Tests cannot be met and significant flood protection/mitigation measures employed and this recommendation is extended within this report.

4.5.5 Alternatives Considered

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)7R	S / M	/	--	++	++	/	++	/	0	++	+	--	++	++
	L	/	--	++	/	0	/	0	0	0	0	/	0	0
Reason for rejection:		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.												
L(i)13	S / M	/	--	++	/	+	/	/	0	++	/	--	+	+
	L	/	--	++	/	0	/	0	0	0	0	/	0	0
Reason for rejection:		There is an application for another incompatible use (housing) on the site which is pending.												
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(n)5	S / M	/	--	++	++	+	++	/	0	++	+	--	++	++
	L	/	--	++	/	0	/	0	0	0	0	/	0	0
Reason for rejection:		To allocate this site, in addition to other sites in the immediate area, could result in over-provision of inert landfill capacity in the local area (i.e. there would be cumulative impacts).												
L(n)8R	S / M	/	--	++	++	+	/	/	0	++	+	--	++	/
	L	/	--	++	/	0	/	0	0	0	0	/	0	0
Reason for rejection:		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.												

4.5.6 Preferred Approach 8: Strategic Site Allocations - Non Hazardous Landfill

Not to allocate any additional non-hazardous landfill void space.

4.5.7 Significant Effects

Sites for: NON HAZARDOUS LANDFILL														
Site Ref.	Temp Effect	Sustainability Objectives (SO)												
		1	2	3	4	5	6	7	8	9	10	11	12	13
N/A	S / M	0	0	0	0	0	0	0	0	0	0	0	0	0
	L	0	0	0	0	0	0	0	0	0	0	0	0	0

- The Capacity Gap Report (2014) assessed 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, (as identified in the Non-Technical Capacity Summary [2015]). There may however be occasions when granting permission may be consistent with the restoration and creation of the permitted final landforms of former mineral extraction sites in line with locational criteria and other policies. Therefore there will be no impacts resulting from this Preferred Approach.

4.5.8 Secondary, Cumulative and Synergistic Effects

- There will be positive indirect impacts on environmental Sustainability Objectives and the sustainable management of waste (SO9) associated with not providing additional capacity for the landfill of non-hazardous waste in the Plan period.

4.5.9 Proposed Mitigation Measures / Recommendations

- No mitigation measures have been recommended.

4.5.10 Alternatives Considered

- None considered as there is no capacity need for the management of this type of waste.

4.5.11 Preferred Approach 9: Strategic Site Allocations - Stable Non-Reactive Hazardous Waste Landfill

To allocate a site considered suitable for the development of waste disposal facilities for the landfilling of Stable Non-Reactive Hazardous Waste to meet the shortfall in hazardous waste landfill capacity.

The preferred site to be allocated are set out in the Site Assessment & Methodology Report, which supports this Revised Preferred Approach Document.

In addition, proposals for new Stable Non-Reactive Hazardous Waste landfill which come forward on non-allocated sites would have to demonstrate a need for such a facility and demonstrate their compliance with the relevant locational criteria. It will also have to be shown why they are more suitable than the allocated site (with reference to the same site assessment criteria and method used for selecting the allocated site, as set out in the Site Assessment & Allocations Report).

4.5.12 Significant Effects

Sites for: STABLE NON-REACTIVE HAZARDOUS WASTE LANDFILL														
Site Ref. Preferred ? (Y/N)	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

- Site L(n)8R will have significant positive impacts on the sustainable management of waste (SO9) and the sustainable use of land (SO3). There will also 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 (SO12) 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 site policy.

4.5.13 Secondary, Cumulative and Synergistic Effects

- 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.

4.5.14 Proposed Mitigation Measures / Recommendations

- 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. This impact on sensitive receptors should be mitigated within any forthcoming site policy.

4.5.15 Alternatives Considered

- None considered as there were no other sites that came forward (as specified by landowners / developers) for this type of waste management.

5 Cumulative Impacts of the Strategic Site Allocations

In the above Preferred Approaches 3-9 the cumulative and synergistic impacts on the sites were explored per facility type. It should also be acknowledged however, that cumulative impacts can also occur of different facilities. As such, this section explores those cumulative and synergistic impacts of the preferred strategic site allocations by:

- Sustainability Objective; and
- By broad area.

5.1.1 Cumulative Impacts of the Strategic Site Allocations by Sustainability Objective

This section looks at the combined impacts of the preferred sites per Sustainability Objective. This goes some way to highlight any cumulative and synergistic impacts and these are elaborated on and explained in the corresponding commentary.

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

Sust. Objectives (SO)	Cumulative Impacts of all Preferred Sites					
1 Biodiversity	++	+			/	-
2 Water	++	-		--		
3 Flooding	++	/			--	
4 Sustainable use of land	++	/			-	-
5 Cultural Heritage	++	+		/		
6 Landscape	++	+	/			-
7 Air Quality	++	/				
8 Energy	+	0				
9 Sustainable waste management	++	+				
10 Transport		+			/	

11 Health & well-being	+	/	-	--
12 Nuisance and access	++			+ /
13 Economic growth	++			+ /

- As can be seen from the above there will be largely positive impacts from the Preferred Sites. Despite this, overall water quality (SO2) the Plan Area could be seen to suffer cumulatively from the allocations. It should be noted however that many of these impacts will be localised.
- A majority proportion of those impacts predicted on 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, should mitigation not be forthcoming from any specific policy criteria attached to each site.
- A large number of the allocations are located in close proximity to properties and this is reflected through the large amount of negative impacts predicted for well-being (SO11). Despite this, there will be no cumulative impacts associated with these multiple impacts where the sites conform to a general theme of dispersal in accordance with the preferred spatial strategy. It should also be noted that negative impacts on this objective are inevitable in line with allocating sites in accordance with the proximity principle.
- 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.

5.1.2 Cumulative Impacts of the Strategic Site Allocations by Broad Area

The Preferred 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 located regarding the strategic road network. Despite this, there may be cumulative localised issues emanating from the Plan's strategic direction.

It should be noted that this section does not define broad areas. Instead, those impacts where clusters of sites exist, or where there are 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 and L(n)7R, and W9, and W8 (Uttlesford cluster)
- W7 and L(i)6, and W26 (Chelmsford cluster)
- L(i)10R, W34 and IW MF2 (Braintree / Chelmsford cluster)
- L(n)1R, L(i)5, W13 and W31 (Colchester / Tendring cluster)
- W3, W20, IW MF3 and W22 (Basildon cluster)

Table 6: Cumulative Impacts of sites L(n)8R, L(n)7R, W9 and W8

Site Ref. Preferred ? (Y/N)	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
W9 Great Dunmow	S / M	++	-	++	++	++	+	++	0	++	+	-	++	/
	L	++	-	++	++	++	+	++	0	++	+	/	++	/
W8 Elsenham	S / M	+	++	++	/	/	-	/	0	+	+	-	++	/
	L	+	++	++	/	/	-	/	0	+	+	/	++	/

- There will be a broad range of significantly positive and minor positive impacts resulting from this cluster, most notably surrounding those objectives to minimise flooding (SO3), the sustainable management of waste (SO9) and nuisance and access (SO12).
- This cluster of sites generally has negative and significantly negative impacts on water quality (SO2) with many of the sites being on or adjacent to a water body. Both site L(n)7R and L(n)8R lie adjacent to the same small brook and left unmitigated the cumulative negative impact resulting from both allocations is likely to be magnified. It is recommended therefore that the mitigation measures for both sites take into account this cumulative effect. The impacts on biodiversity, both sites being in close proximity to a LoWS, are similar in that their individual impacts could magnify cumulatively. The same stance on mitigation would apply as that for water quality objectives.
- 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.
- No other significant negative cumulative impacts have been highlighted that can not be mitigated through each site individually.

Table 7: Cumulative Impacts of sites W7, L(i)6 and W26

Site Ref. Preferred ? (Y/N)	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
W26 Winsford Way	S / M	+	++	++	++	++	/	++	0	++	+	-	++	++
	L	+	++	++	++	++	/	++	0	++	+	/	++	++

- Regarding the cumulative impacts of the two sites at Sandon, the area of L(i)6 included the area of W7 for the purpose of that appraisal. As such, the appraisal of L(i)6 is reflective of the cumulative impacts of the two Sandon sites. As can be seen the impacts of site W26 at Winsford Way do not share any significant impacts with the Sandon sites other than a strengthen of employment opportunities in the area (SO13). Any further cumulative impacts can therefore be discounted.
- The Sandon sites both have significant negative impacts on water quality (SO2) and flooding (SO3). Despite this, there will be no cumulative strengthening of this impact, due to separate water bodies being affected that are distinctly separate to specific areas of the site and as such unrelated to each other.
- 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.
- 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(i)10R, W34 and IWMF2

Site Ref. Preferred ? (Y/N)	Temp Effect	Sustainability Objectives (SO)												
		1	2	3	4	5	6	7	8	9	10	11	12	13
L(i)10R Blackleys (Site 1)	S / M	+	-	++	++	+	/	++	0	+	+	--	++	++
	L	+	-	++	++	+	/	++	0	+	+	/	++	++
W34 Cordons Farm	S / M	+	++	++	++	++	/	++	0	++	+	-	++	+
	L	+	++	++	++	++	/	++	0	++	+	/	++	+
IWMF2 Rivenhall	S / M	+	++	--	-	+	-	++	++	++	+	--	++	/
	L	+	++	--	-	+	-	++	++	++	+	/	++	/

- The impacts of these three sites are broadly positive when accumulated, especially in regards to the sustainable management of waste (SO9) and the locations minimising numerous environmental and infrastructure based objectives.
- Despite this, the potential for a cumulative negative impact on localised landscape quality (SO6) may exist with a range of singularly moderate to high impacts that could magnify. It is recommended that individual mitigation measures reflect this cumulative impact if there is proven to be a cumulative impact by landscape specialists.
- 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.
- No other significant negative cumulative impacts have been highlighted that can not be mitigated through each site individually.

Table 9: Cumulative Impacts of sites L(n)1R, L(i)5, W13 and W31

Site Ref. Preferred ? (Y/N)	Temp Effect	Sustainability Objectives (SO)												
		1	2	3	4	5	6	7	8	9	10	11	12	13
L(n)1R Ardleigh	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
W13 Wivenh- oe Quarry	S / M	/	-	++	-	++	/	/	/	++	/	--	+	++
	L	/	-	++	-	++	/	/	/	++	/	/	+	++
W31 Morses Lane	S / M	+	++	++	/	/	/	/	0	+	+	-	++	++
	L	+	++	++	/	/	/	/	0	+	+	/	++	++

- The sites of L(n)1R and L(i)5 can be seen to have broadly similar impacts across all sustainability objectives, although for largely separate reasons. The site at W31 is also suitably detached in terms of location and size to contribute to any cumulative effects.
- Both site L(i)5 and W13 lie adjacent to the same water body to the west and east respectively and left unmitigated the cumulative negative impact on water quality (SO2) resulting from both allocations is likely to be magnified. It is recommended therefore that the mitigation measures for both sites take into account this cumulative effect. Cumulative effects may also occur surrounding each site's impact on biodiversity (SO1) in recognition of the Colne Estuary SPA in relative close proximity and in conjunction with the findings of the HRA.
- The cumulative impact of these sites on the localised transport network (SO10) would have to be explored in detail due to their minor individual impacts in accumulation of each other, their distances to the strategic road network and their relative close proximity. This is particularly the case with sites L(i)5 and W13.
- No other significant negative cumulative impacts have been highlighted that can not be mitigated through each site individually.

Table 10: Cumulative Impacts of sites W3, W20, W22 and IWMF3

Site Ref. Preferred ? (Y/N)	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	++	+	/	+	++
IWMF3 – Tovi EcoPark	S / M	+	++	--	++	++	/	++	0	++	+	-	++	++
	L	+	++	--	++	++	/	++	0	++	+	/	++	++
W22 Michelins Farm	S / M	+	-	++	/	/	+	++	0	+	/	-	+	++
	L	+	-	++	/	/	+	++	0	+	/	/	+	++

- As can be seen from the above comparative assessments of the four sites of W3, W20, IWMF3 and W22 (should W22 come forward as an opportunity site) 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 would also have to be explored in further detail due to their proximity to each other.
- No other significant negative cumulative impacts have been highlighted that can not be mitigated through each site individually.

6 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.

7 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

Essex County Council

County Hall

Chelmsford

Essex

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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