

URS



Sustainability Appraisal of the Proposed
Submission Core Strategy and Policies for
Management of Development,
Development Plan Document
SA Report

February 2010 as updated in July 2011

Prepared for

Thurrock Borough Council

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Final SA Report July 2011

Rev	Date	Details	Prepared by	Reviewed by	Approved by
01	February 2010	Final report	Amalia Fernandez-Bilbao Senior Consultant	Steve Smith Associate	Andy McNab Director
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This report updates the Sustainability Appraisal Report originally published alongside the Proposed Submission Core Strategy and Policies for Management of Development DPD. To ensure compliance with the Environmental Assessment of Plans and Programmes Regulations 2004, the following further information is provided:

- Further information on how the SA process has been taken into account throughout the plan development process and how it has influenced plan content (see **Section 1.7**).
- Further detail on the spatial alternatives considered as part of the plan development process (see **Section 5.3**)
- Further detail in relation to the Broad Locations and alternatives and impacts of three spatial Policies (see **Section 7.2**).
- Updates as a result of further changes to Policies CSTP3 – Gypsy and Travellers and CSTP4 – Travelling Showpeople (see **Sections in Chapters 16 and 18**.)

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Abbreviations

AMR	Annual Monitoring Report
AONBs	Areas of Outstanding Natural Beauty
AQMAs	Air Quality Management Areas
BAP	Biodiversity Action Plan
BME	Black and Minority Ethnic
BPEO	Best Practicable Environmental Option
BREEAM	Building Research Establishment Environmental Assessment Method
CBD	Convention on Biological Diversity
CLG	Communities and Local Government
CO ²	Carbon Dioxide
DaSTS	Delivering a Sustainable Transport System
DCLG	Department for Communities and Local Government
DCSF	Department for Children, Schools and Families
DECC	Department of Energy and Climate Change
DEFRA	Department for Environment, Food and Rural Affairs
DfT	Department for Transport
DIUS	Department for Innovations, Universities and Skills
DPD	Development Plan Document
EERA	East of England Regional Assembly
EqIA	Equalities Impact Assessment
GHG	Greenhouse Gas
GIFP	Green Infrastructure Plan
GVA	Gross Value Added
HGV	Heavy Goods Vehicle
HIA	Health Impact Assessment
HRA	Habitats Regulations Assessment
ICT	Information and Communications Technologies
IMD	Index of Multiple Deprivation
ISA	Integrated Sustainability Appraisal
KCDC	Key Centres for Development and Change
LAA	Local Area Agreement
LDD	Local Development Document
LDF	Local Development Framework
LSP	Local Strategic Partnership
LTP	Local Transport Plan
MWDPD	Minerals and Waste Development Plan Document
NHPAU	National Housing and Planning Advice Unit
NO ₂	Nitrogen Dioxide
ONS	Office of National Statistics
PCT	Primary Care Trust
PDL	Previously Developed Land
PPPSI	Plans, Programmes, Strategies And Initiatives

PPS	Planning Policy Statement
RES	Regional Economic Strategy
RSS	Regional Spatial Strategy
SA	Sustainability Appraisal
SEA	Strategic Environmental Assessment
SHMA	Strategic Housing Market Assessment
SO	Sustainability objective
SO ₂	Sulphur Dioxide
SPA	Special Protection Area
SPD	Supplementary Planning Document
SSO	Strategic Spatial Objective
SUDs	Sustainable Urban Drainage systems
TTGDC	Thurrock Thames Gateway Development Corporation
UDC	Urban Development Corporation
UNFCCC	United Nations Framework Convention on Climate Change
WFD	Water Framework Directive
WHO	World Health Organisation

1 Introduction

- 1.1.1 URS Scott Wilson was commissioned by Thurrock Borough Council ('the Council') to undertake an independent Sustainability Appraisal (SA) of the borough's Proposed Submission Core Strategy and Policies for the Management of Development, Development Plan Document (the "DPD"). SA seeks to identify the economic, social and environmental impacts of a plan and suggests ways to avoid or minimise negative impacts and maximise positive ones. The Council has undergone a number of stages of plan preparation to date, and URS Scott Wilson has worked alongside the Council in formal and informal ways to ensure sustainability considerations are taken into account. This report sets out the findings of the SA of the 'Proposed Submission' version of the DPD.
- 1.1.2 The approach followed is to undertake an Integrated Sustainability Appraisal which incorporates the requirements of:
- Strategic Environmental Assessment (SEA) – an examination of the DPD's impacts on the environment;
 - Health Impact Assessment (HIA) – an examination of the DPD's impacts on Human Health;
 - Equalities Impact Assessment (EqIA) – an examination of the DPD's differential impact on Equality Groups.
- 1.1.3 In addition, URS Scott Wilson has been commissioned to undertake a Habitats Regulations Assessment (HRA). HRA tests the potential impacts of a policy or plan on nature conservation sites of European importance and is a requirement under EU legislation for certain plans and projects¹. An HRA is required because Thurrock contains the Thames Estuary and Marshes SPA (Special Protection Area). Our approach to HRA follows current CLG Guidance². The findings of the HRA have been included in a separate report.

1.2 Integrated Sustainability Appraisal

- 1.2.1 The SA has been conducted in an integrated manner through the inclusion of Equality Impact Assessment (EqIA) and Health Impact Assessment (HIA). The SA will therefore be referred to as an Integrated Sustainability Appraisal (ISA).
- 1.2.2 EqIA and HIA are increasingly being undertaken and good practice is beginning to emerge. We have incorporated these assessments into the SA process through the inclusion of equality and diversity and health as well as health equality objectives in the SA framework.
- 1.2.3 Whereas SA considers the impacts of a plan on the population as a whole, EqIA and aspects of HIA are concerned with ensuring that a plan
- addresses the specific needs of particular groups of people; and

¹ Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (the 'Habitats Directive') implemented through The Conservation (Natural Habitats, &c.) (Amendment) Regulations 2007

² Communities and Local Government (2006). Planning for the Protection of European Sites: Appropriate Assessment – Guidance for Regional Spatial Strategies and Local Development Documents [online] available at: <http://www.communities.gov.uk/archived/publications/planningandbuilding/planning2> (accessed 21 January 2010).

- does not have a disproportionately negative impact – particularly in combination with past impacts and the likely future impacts of other policies, plans etc. – on any sector of the population.

1.3 Equality Impact Assessment

- 1.3.1 Guidance on EqIA suggests a six-stage process of screening, scoping / defining, information gathering, making a judgement, action planning, and publication and review³. This very closely matches the SA process, but focuses on the needs of, and impacts on, specific groups and the proportionality of impacts.
- 1.3.2 There are six identified equality target groups, or equality strands, that are central to the equality agenda:
- race
 - gender
 - disability
 - sexual orientation
 - age
 - religion and or belief
- 1.3.3 In order to undertake the EqIA, we have included a specific objective in the SA (see Section 16) and other aspects of equality (e.g. access to services) have been considered under the corresponding SA objective. We have then followed the same process for the EqIA as we followed for the SA, that is we have asked how the DPD will impact on equality issues.

1.4 Health Impact Assessment

- 1.4.1 Part of HIA involves considering a plan's impacts on the overall health of the population as a whole, and part focuses on identifying and managing health inequalities (often linked with deprivation). The former takes an approach similar to that of any SA topic; the latter is more like EqIA, using health as a specific dimension of equality.
- 1.4.2 Considerable guidance on health impact assessment exists, including Department of Health screening questions for HIA⁴, draft guidance on health and SEA⁵, information on healthy communities⁶, and an 'HIA Gateway' run by the Association of Public Health Authorities⁷. This guidance mostly focuses on the former aspects of HIA.
- 1.4.3 We have covered both aspects of HIA in the SA framework. This has been achieved through the inclusion of a specific SA objective dealing with health inequalities (see Section 20) and also through several other SA topics. This is because it should be recognised that many

³ Improvement and Development Agency (2008). *The EqIA process: six-step guide* [online] available at: <http://www.idea.gov.uk/idk/core/page.do?pageld=8017502> (accessed 21 January 2010).

⁴ Department of Health (2007). *Screening questions for health impact assessment* [online] available at: http://www.dh.gov.uk/en/Publicationsandstatistics/Legislation/Healthassessment/DH_4093617 (accessed 21 January 2010).

⁵ Department of Health (2008). *Draft guidance on health in strategic environmental assessment* [online] available at: http://www.dh.gov.uk/en/Consultations/Closedconsultations/DH_073261 (accessed 21 January 2010).

⁶ Cave, B., P. Molyneux and A. Coutts (2004). *Healthy sustainable communities* [online] available at: <http://www.mksm.nhs.uk/FileAccess.aspx?id=148> (accessed 21 January 2010).

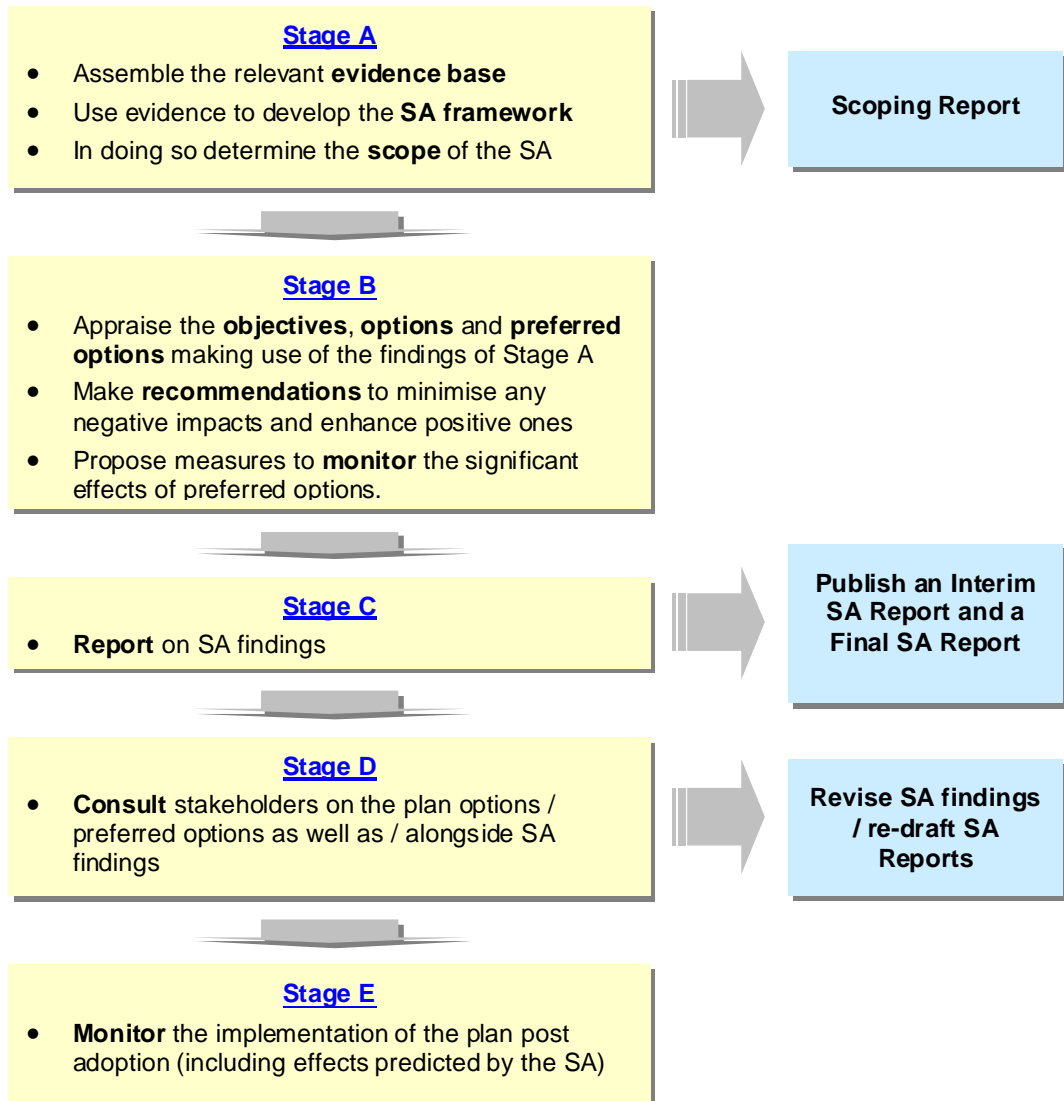
⁷ APHO (no date). *HIA Gateway* [online] available at: http://www.apho.org.uk/default.aspx?QN=P_HIA (accessed 21 January 2010).

determinants of health straddle other SA topics such as access to open space, good air and water quality, being employed and living in good quality housing.

1.5 Strategic Environmental Assessment/ Sustainability Appraisal

- 1.5.1 Strategic Environmental Assessment (SEA) involves the systematic identification and evaluation of the environmental impacts of a strategic action (e.g. a plan or programme). In 2001, the EU legislated for SEA with the adoption of Directive 2001/42/EC on the assessment of the effects of certain plans and programmes on the environment (the 'SEA Directive'). The Directive entered into force in the UK on 21 July 2004 and applies to a range of English plans and programmes including Local Development Frameworks (LDFs). A LDF is a folder of Development Plan Documents (DPDs) and Supplementary Planning Documents (SPDs) that together outline the approach to planning that will be followed within a local authority (e.g. Thurrock) area.
- 1.5.2 The Government's approach is to incorporate the requirements of the SEA Directive into a wider process that considers economic and social as well as environmental effects. This combined process is known as 'Sustainability Appraisal (SA)'. Under the Planning and Compulsory Purchase Act 2004 (enacted through the Town and Country Planning Regulations, 2008), local authorities must undertake SA for each of their DPDs and some SPDs – the constituent parts of the LDF. SA is therefore a statutory requirement for LDFs along with SEA. In November 2005, the Government published guidance – which has been followed in this appraisal - on undertaking SA of LDFs incorporating the requirements of the SEA Directive ('the Guidance').
- 1.5.3 The Guidance advocates a five-stage approach to undertaking SA (see **Figure 1**). Stage A of the process has been carried out, with the Scoping Report being published in September 2005 and an updated Scoping Report produced in September 2007. The key information covered in the Scoping Report has been updated for this report (see Section 4).

Figure 1: The five stage approach to SA



1.6 The story so far

1.6.1 Thurrock’s Core Strategy has been formulated in parallel with the ISA and HRA, which have contributed towards the reasoning behind the policies set out within it. This section sets out the ISA story. The next section provides commentary on how the Council has integrated the ISA results at each stage of the plans production to form the final submitted Core Strategy.

1.6.2 URS Scott Wilson was commissioned by the Council in 2005 to undertake the Sustainability Appraisal (SA) and Habitats Regulations Assessment (HRA) of Thurrock’s Core Strategy and Policies for Management of Development DPD. The first stage of Thurrock Council’s SA was the production and publication of the Scoping Report prior to the development of the Issues and Options Core Strategy and Site Specific Allocations DPDs Consultation Documents. The Scoping Report for Thurrock set the scene for future work by:

- Identifying relevant plan, programmes and sustainability objectives;

- Collecting baseline information;
 - Identifying sustainability issues; and
 - Developing the Sustainability Appraisal Framework.
- 1.6.3 The 2005 Scoping report (adopted November 2005) was made available for consultation in September-October 2005 with key stakeholders invited to a workshop. The Scoping Report was also available on the Council's website at the time of consultation.
- 1.6.4 The Council first developed options for the Core Strategy for public consultation in July 2006. At that point, an Interim SA Report was published to accompany the Core Strategy Issues and Options document at formal consultation. This document helped to assess the options to be taken forwards to the next stage of the Core Strategy. The Interim SA Report covered both the Core Strategy and Site Allocations and Policies Issues and Options documents.
- 1.6.5 The Council then developed a "Preferred Options" document that underwent public consultation between December 2007 and February 2008. SA and HRA reports were published for consultation at the same time. The SA Report published for consultation was prepared for both the Core Strategy and Site Allocations DPDs that were published and consulted on in parallel. Both Preferred Options documents also included a summary of the previous SA stage.
- 1.6.6 In July – August 2009, URS Scott Wilson was presented with an early draft of the DPD Proposed Submission Core Strategy for the benefit of undertaking an early appraisal to assist the Council in the finalised draft of the Core strategy. URS Scott Wilson also prepared an informal high level appraisal and 'SA Commentary' (Bridging Report). The Bridging Report considered the sustainability implications of the emerging Strategic policies, Thematic policies and Policies for Management of Development. Two appraisal workshops were also undertaken with the Consultants in order to discuss the findings of the informal appraisal. The SA Bridging Report was not made public.
- 1.6.7 Following these exercises, the Council prepared its Proposed Submission Core Strategy. URS Scott Wilson undertook an integrated SA of the Core Strategy and its policies which was reported and published for consultation at the same time as the Core Strategy on 26 February 2010 to 9 April 2010.
- 1.6.8 Following consultation on the Proposed Submission Core Strategy DPD, the Council made amendments to some of its policies mainly derived from responses received. The changes were included in the Post Submission Schedule of Focused changes to the Core Strategy and Policies for Management of Development DPD. The schedule included a number of minor changes and was submitted to the Inspector for consideration and possible inclusion into the Binding Report. URS Scott Wilson reviewed the changes from a sustainability point of view in September 2010. An 'SA Supplement – Pre-examination Changes' report was published for consultation at the same time as the Schedule.
- 1.6.9 The Public Examination Hearings into the Core Strategy began on 14 March 2011. During the Hearing process, the Inspector advised that further Focused Changes consultation on the following needed to be conducted:
- A revision to the proposed Green Belt boundary in the vicinity of the DP World development site (former Shell Haven refinery site) in the east of the borough.

- The identification of a small number of Broad Locations within the Thurrock Green Belt and minor text changes to various policies to confirm how specific policy zones boundaries or sites will be identified on the Proposals Map in due course.

- 1.6.10 Both proposed focused changes were assessed to determine their sustainability implications for the Core Strategy.
- 1.6.11 All reports mentioned are available on the Councils website at: www.thurrock.gov.uk/planning/strategic
- 1.6.12 A Further Focused Change to policies CSTP3 (Gypsy and Travellers) and CSTP4 (Travelling Showpeople) was subject to public consultation in August - September 2011. Both proposed focused changes were assessed to determine their sustainability implications, with findings published in an SA Report Addendum.

1.7 How the ISA has informed the plan at each stage and how the Council has taken this into account

- 1.7.1 This section sets out how each stage of the ISA and HRA, have been integrated and used to help shape the final policies set out within the Submitted Core Strategy. This section has been written by the Council. More detail can also be found within an 'Audit Trail Report', which is available on the Council's website.
- 1.7.2 The preparation of the Thurrock Core Strategy has been preceded by a series of draft stages where the Council has considered a number of approaches to achieving the vision and objectives of the DPD. These are referred to in the strategic spatial options as well as different thematic and development management policies.
- 1.7.3 The various policy approaches underwent SA at the Issues and Options (2006), Preferred Options (2007), the informal SA / HRA Bridging Report (2009) stages and the Proposed Submission (2010) and Focused Changes (2010 and 2011). At each of these stages, the findings of the SA informed the development of Thurrock's policies and the final wording and content of policies. The stages are summarised below:

Issues and Options (2006)

- 1.7.4 Four scenarios or options (shown in the following table) were considered for delivering future growth in Thurrock plus a 'business-as-usual' option defined as the continuation of the baseline situation. The scenarios included different distributions of dwellings in green belt areas, urban areas, existing allocations, etc. **Table 1** illustrates the performance of the possible Strategic Spatial Options for the Issues and Options Core Strategy. The figures outlined represent the total performance of the Spatial Option against all the SEA Objectives (where the assessment outlined a combination of scores these were double counted for the summary).

Table 1: Illustration of the Strategic Options Interim SA results

Option	Summary of the Options Scores						
	+++	++	+	0	-	--	---
Business as usual	1	6	5	2	3	4	0
Option 1	5	5	3	0	3	4	0
Option 2	5	5	3	0	3	4	0
Option 3	1	7	5	0	3	4	1
Option 4	1	6	6	0	2	5	1

- 1.7.5 Option 1 would result in the concentration of growth within the urban areas throughout Thurrock; similarly Option 2 sought to ensure that development was concentrated within the existing urban areas, as well as the facilitation of urban fringe release at Grays. The SA assessment scores highlighted that overall there is no variation in terms of the degree of positive or negative scores for these options. Furthermore, both options 1 and 2 had the same number of highly positive (+++) scores.
- 1.7.6 With regard to the remaining options 3 and 4, in overall positive terms, there was no variation in these. However, if the degree of positive score is taken into consideration, disparity was evident. Both options 3 and 4 would result in a lesser degree of positive scores, and also a greater amount of highly negative scores.
- 1.7.7 The Interim SA therefore demonstrated that the Preferred Spatial Option for Thurrock, which would be taken forwards to the Preferred Options Core Strategy Document, should be either Option 1, 2 or a combination of both, as these options displayed a higher degree of positive scores and a lesser volume of negative scores. Options 1 and 2 were the more socially, economically and environmentally acceptable spatial approaches for the future of Thurrock.
- 1.7.8 The overall conclusion from the SA assessment also concludes that the overall plan performed well in regards to sustainability.

Production of the Preferred Options Core Strategy

- 1.7.9 Following the outcome of the Interim SA carried out at the Issues and Options stage which indicated that Option 1 and 2 were inherently more sustainable, the Council concluded that Option 1 would not preclude Green Belt release in its entirety as there will be particular cases where 'very special circumstances' prevail to warrant Green Belt land release and as such the Councils preferred option was based broadly on Option 2 with an additional local scale of Green Belt land release for housing.

Preferred Options (2007)

- 1.7.10 During this stage reasonable alternative spatial options were set out in chapter 6 of the DPD and public comment was invited. It was however judged that Option 2 was the Preferred Spatial Option. No reasonable alternatives Spatial Policies were identified in Chapter 7, however, alternatives were identified for the majority of thematic and development control policies so each policy, including any applicable alternative, was appraised individually.
- 1.7.11 A number of points were raised throughout the assessment with regards the significant adverse effect a large number of employment, housing and infrastructure would have. In summary, they included the following:

- **Flooding:** There is a significant issue of flood risk that faces new employment development in the borough. Areas of Tilbury, Purfleet and Grays are in flood zones, which will need to be fully taken into consideration in taking forward these sites.
- **Air Quality and Noise:** The planned growth poses significant issues for air quality and noise across the borough. Emissions to air and noise are generated directly from construction activities and also indirectly from associated traffic during both the construction and operation phases.
- **Biodiversity:** The scale of development, concentrating growth in urban areas and prioritising brownfield development, will increase pressure on areas with brownfield biodiversity.
- **Water:** The substantial increase in the provision of housing and employment land is likely to impact on water availability both in Thurrock and in the wider region and potentially on water-based habitats.

- 1.7.12 The SA concluded that many of the adverse effects identified should be mitigated for internally, within the Core Strategy. This means that the Core Strategy policies proposed would go some way to mitigate such pressures identified in the SA.
- 1.7.13 The SA also suggested the rephrase or the insertion of wordings to tighten the policy or to provide clarity. The SA also suggested the inclusion of policies to address issues such as regeneration, local goods and farmers market.
- 1.7.14 The full report can be found on the Council's website at www.thurrock.gov.uk/planning/strategic.

Production of the Draft Proposed Submission Core Strategy

- 1.7.15 The Council went through every comment made in the SA document and integrated them, where it was deemed appropriate, into the draft Proposed Submission policies. These include strengthening policies or conducting additional technical studies such as the Water Cycle Study which analysed the capacity of the water supply, wastewater infrastructure and water environment in the Borough.
- 1.7.16 There was some suggestion made which was not taken onboard. This included the suggestion to increase wheelchair accessible housing from the Councils 3% to 10%. The Council re-examined the evidence and 3% remains as the most viable option.
- 1.7.17 Following the comments, the Council also introduced new policies to the Proposed Submission Core Strategy. They include 'Neighbourhood Renewal' which identifies priority areas in the borough which will form as a catalyst for regeneration; and 'Productive land' which will ensure the appropriate management for food production in the Borough.

SA Bridging Report (2009)

- 1.7.18 The Council began drafting the policies for the Proposed Submission Core Strategy, taking on board SA comments that were made on the Preferred Options document. The Council were in continuous discussion with URS Scott Wilson who were carrying out the ISA, through internal meetings and telephone conversations. URS Scott Wilson were also provided with draft copies of the emerging Proposed Submission Policies and carried out a Preliminary Assessment of them in June 2009.

- 1.7.19 This stage of the appraisal did not constitute a formal SA stage but Thurrock Council considered it to be a useful part of their policy development. The appraisal of the draft Proposed Submission DPD policies included, as appropriate, comments on certain policies and background text to improve their performance against Sustainability Objectives.
- 1.7.20 URS Scott Wilson assessed the Core Strategic Spatial Policies (CSSPs), the Core Strategic Thematic Policies (CSTPs) and the Policies for the Management of Development (PMDs) individually. Comments made at this preliminary stage were very specific and detailed to each policy. This included suggested wordings change. There were no generic comments which re-occurred throughout. Also some suggestions were not within the remit of the Core Strategy and therefore not adopted.

Preparation of the Proposed Submission Core Strategy

- 1.7.21 The Council went through each SA comment and integrated them into the relevant policy of the Proposed Submission Core Strategy where the Council deemed appropriate. This included amendments to policy wordings derived from comments made. The Council also reduced the size of some of its policies following comments made from the SA. The titles, supporting texts and policy texts were changed and/or reworded to reflect the broader scope suggested in the SA report. The Audit Trail Report (available on the Council's website) provides details of the suggested wording changes the Council took onboard at that stage.

Proposed Submission (2010)

- 1.7.22 The SA highlighted that they key sustainability impacts including flood risk, biodiversity, energy and resource consumption and the production of waste of the DPD will arise from the high levels of growth that regional policy has set for Thurrock and that the Council will need to deliver. These levels of growth will however also result in positive impacts in relation to improving the local economy, creating jobs and providing housing and services to existing and future residents. If the development is accompanied by all of the improvements set out in the DPD including infrastructure, services, community, education and health facilities, open spaces, transport, etc. then as a whole, the plan represents a fairly sustainable way of delivering the required growth.
- 1.7.23 The appraisal has shown that the majority of Thematic Policies are likely to lead to positive impacts on sustainable development. In particular, the environment, climate change, water and coastal thematic policies will provide much of the mitigation that is necessary to reduce the impacts of development on the Borough's natural and built environment.
- 1.7.24 The main recommendation related to the monitoring of crime and the fear of crime in the Borough.

Preparation of the Submission Core Strategy

- 1.7.25 The outcome of the SA did not trigger any major changes to the Core Strategy. The issue of monitoring was addressed in the Annual Monitoring Report.

SA Addendum (Post-submission 2010)

- 1.7.26 Following the Representations on the Submission Core Strategy, the Council identified some changes needed to be made to the Core Strategy. These changes were included in the 'Schedule of Proposed Focused Changes to the Submission Core Strategy and Policies for Management of Development DPD'.
- 1.7.27 The SA identified that majority of the changes that have been proposed to the DPD had no overall effect and in some cases would improve the sustainability of the policies involved. Although minor changes were made to a number of policies, there were however three Core Strategy policies that had undergone changes that could have affected the results of the previous SAs. The policies were:
- PMD5: Open Spaces, Outdoor Sports and Recreational Facilities
 - PMD7: Biodiversity and Development
 - PMD8: Parking Standards.
- 1.7.28 The assessment of these policies concluded that the overall sustainability of the policies can be considered to have been enhanced by the changes proposed by the Council.
- 1.7.29 No amendment was made to the Schedule following the SA.

SA - Addendum- Focused Changes (Examination 2011)

- 1.7.30 The assessments of both Focused Changes documents referred to in paragraph 1.6.9 did not identify any sustainability implications to the Core Strategy.
- 1.7.31 No amendment was made to the Schedule following the SA.

1.8 This report

- 1.8.1 The main aim of this report is to document Stage B of the integrated SA of Thurrock Council's Proposed Submission Core Strategy and Policies for Management of Development DPD. This report also summarises the findings of Stage A of the SA process. Stage B of the SA process involves the main body of appraisal work and consists of five key tasks:
- B1 – Testing the DPD Objectives against the SA Framework;
 - B2 – Developing and refining options;
 - B3 – Predicting and assessing effects;
 - B4 – Identifying mitigation measures; and
 - B5 – Developing monitoring proposals.
- 1.8.2 This report fulfils the requirements of Stage C, 'preparing the SA Report' (see Figure 1 above).
- 1.8.3 The remainder of this document is structured as follows:

Table 2: Report structure

Chapter	Contents
Chapter 2	Introduces the Core Strategy and Policies for the Management of Development DPD
Chapter 3	Describes the appraisal methodology
Chapter 4	Reviews Stage A findings including updates to the sustainability context and baseline
Chapter 5	Presents the findings of the test of the DPD's objectives against the SA Framework and reviews the consideration of alternatives undertaken by the Council
Chapter 6	Outlines the structure for presenting the appraisal findings
Chapter 7	Summarises the appraisal findings of the Spatial Policies and Broad Regeneration Areas and consideration of alternative options.
Chapters 8-21	Summarises the appraisal findings of the Spatial policies, Thematic policies and Policies for the Management of Development, including recommendations on mitigation/enhancement measures and monitoring
Chapter 22	Brings together the main findings of the SA
Chapter 23	Describes the next steps and the consultation procedure
Appendices	Set out the detailed appraisal findings and other supporting information

Meeting the requirements of the SEA Directive

- 1.8.4 The SEA Directive sets out procedural elements that must be followed in order to comply with the legislation. In particular, the SEA Directive requires the preparation of an 'Environmental Report' on the implications of the plan or programme in question. This SA report incorporates the information that must be included in the Environmental Report. An SEA roadmap, demonstrating how this report conforms to the Directive is shown in **Table 3**. In order to retain clarity, the stages of the process that address the requirements of the SEA Directive are also clearly highlighted in boxes where necessary. Furthermore, an SEA/SA checklist is included as Appendix 1.

Table 3: SEA road map

Environmental Report requirements ⁸	Section of this report
(a) an outline of the contents, main objectives of the plan or programme and relationship with other relevant plans and programmes;	Chapters 2, 4 and Appendix 2
(b) the relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan or programme;	Chapter 4 and 8 to 21
(c) the environmental characteristics of areas likely to be significantly affected;	Chapter 4 and 8 to 21
(d) any existing environmental problems which are relevant to the plan or programme including, in particular, those relating to any areas of a particular environmental importance, such as areas designated pursuant to Directives 79/409/EEC (The Birds Directive) and 92/43/EEC (The Habitats Directive);	Chapter 4 and 8 to 21
(e) the environmental protection objectives, established at international, Community or Member State level, which are relevant to the plan or programme and the way those objectives and any environmental considerations have been taken into account during its preparation;	Chapter 4 and Appendix 2
(f) the likely significant effects on the environment, including on issues such as biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationship between the above factors;	Chapters 7 to 21
(g) the measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment of implementing the plan or programme;	Chapters 7 to 22
(h) an outline of the reasons for selecting the alternatives dealt with, and a description of how the assessment was undertaken including any difficulties (such as technical deficiencies or lack of know-how) encountered in compiling the required information;	Chapter 5 and 7
(i) a description of the measures envisaged concerning monitoring in accordance with Article 10;	Chapters 7 to 21
(j) a non-technical summary of the information provided under the above headings.	Non-technical Summary (separate volume)

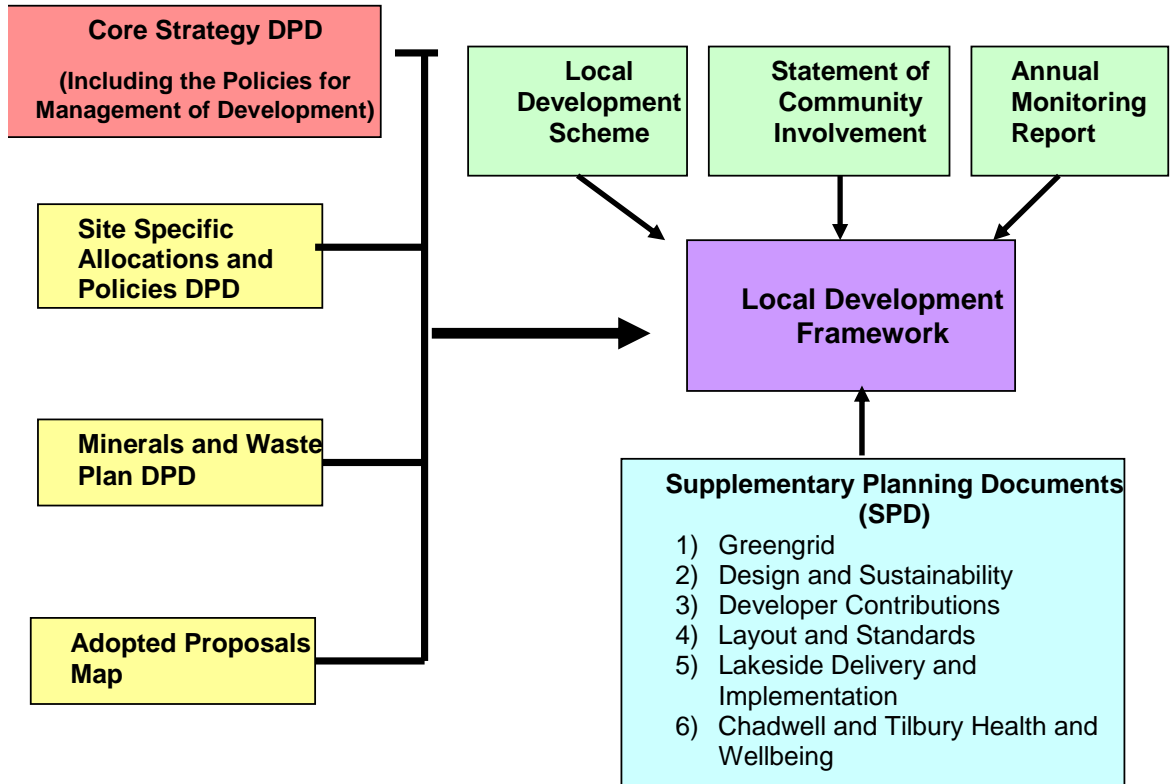
⁸ As listed in Annex I of the SEA Directive (Directive 2001/42/EC on the assessment of the effects of certain plans and programmes on the environment)

2 The Core Strategy and Policies for the Management of Development DPD

Thurrock Council's Local Development Framework

- 2.1.1 The Core Strategy and Policies for the Management of Development DPD is a strategic document providing broad guidance on the scale and distribution of development and the provision of supporting infrastructure within Thurrock. It sets out the spatial vision, spatial objectives, the spatial development option and policies for Thurrock to 2026 together with a monitoring and implementation framework.
- 2.1.2 The Core Strategy directly supports the delivery of Thurrock's Sustainable Community Strategy by ensuring that land and sites are made available for health, education, open space, industry and housing, together with improved accessibility to these facilities by all sections of the community.
- 2.1.3 This SA has been undertaken on a Proposed Submission version of the DPD that Thurrock Council proposes to submit to the Secretary of State and the Planning Inspectorate for Examination in Public (EiP).
- 2.1.4 Once adopted, the Local Development Framework (LDF) for Thurrock will become the Statutory Spatial Development Plan. The LDF is made up of a portfolio of documents, including the Core Strategy. The LDF will set out the spatial strategy, policies and proposals to guide the future development and use of land in Thurrock up to the year 2026.
- 2.1.5 The LDF is part of a system for the preparation of development plans in England that was introduced by the Planning and Compulsory Purchase Act 2004. The Local Development Framework will replace the existing adopted Thurrock Borough Local Plan (1997) that is the current development plan for Thurrock.
- 2.1.6 **Figure 2** illustrates where the DPD fits into Thurrock's emerging LDF. The Core Strategy is the overarching Development Plan Document (DPD) that provides the strategic framework for other DPDs and Supplementary Planning Documents (SPDs).

Figure 2: Role of the Core Strategy in Thurrock's LDF



2.1.7 The Core Strategy and Policies for the Management of Development DPD includes the following elements:

- A Spatial Vision for Thurrock
- Strategic Spatial Objectives
- Strategic Spatial Policies
- Thematic Policies
- Policies for the Management of Development and a
- Monitoring and Implementation Framework

2.1.8 A list of the policies appraised has been included in **Table 4** below:

Table 4: Core Strategy and Policies for the Management of Development DPD

Spatial Policies	Thematic Policies (cont.)
CSSP1: Sustainable Housing and Locations	CSTP23: Thurrock Character and Distinctiveness
CSSP2: Sustainable Employment Growth	CSTP24: Heritage Assets and the Historic Environment
CSSP3: Sustainable Infrastructure	CSTP25: Addressing Climate Change
CSSP4: Sustainable Green Belt	CSTP26: Renewable or Low-Carbon Energy Generation
CSSP5 Sustainable Greengrid	CSTP27: Management and Reduction of Flood Risk
Thematic Policies	CSTP28: River Thames
CSTP1: Strategic Housing Provision	CSTP29: Waste Strategy
CSTP2: The Provision Of Affordable Housing	CSTP30: Regional Waste Apportionment
CSTP3: Gypsies And Travellers	CSTP31: Provision Of Minerals
CSTP4: Travelling Showpeople	CSTP32: Safeguarding Mineral Resources
CSTP5: Neighbourhood Renewal	CSTP33: Strategic Infrastructure Provision
CSTP6: Strategic Employment Provision	Policies for the Management of Development
CSTP7: Network of Centres	PMD1: Minimising Pollution and Impacts on Amenity
CSTP8: Viability and Vitality of Existing Centres	PMD2: Design and Layout
CSTP9: Well-being: Leisure and Sports	PMD3: Tall Buildings
CSTP10: Community Facilities	PMD4: Historic Environment
CSTP11: Health Provision	PMD5: Open Spaces, Outdoor Sports and Recreational Facilities
CSTP12: Education and Learning	PMD6: Development in the Green Belt
CSTP13: Emergency Services and Utilities	PMD7: Biodiversity and Development
CSTP14: Transport in the Thurrock Urban Area: Purfleet to Tilbury	PMD8: Parking Standards
CSTP15: Transport in Greater Thurrock	PMD9: Road Network Hierarchy
CSTP16 : National and Regional Transport Networks	PMD10: Transport Assessments and Travel Plans
CSTP17: Strategic Freight Movement and Access to Ports	PMD11: Freight Movement
CSTP18: Green Infrastructure	PMD12: Sustainable Buildings
CSTP19: Biodiversity	PMD13: Decentralised Renewable and Low Carbon Energy Generation
CSTP20: Open Space	PMD14: Carbon Neutral Development
CSTP21: Productive Land	PMD15: Flood Risk Assessment
CSTP22: Thurrock Design	PMD16: Developer Contributions

3 Appraisal Methodology

3.1.1 This section sets out the methodology for appraisal, as required by the SEA Directive:

The Environment report required under the SEA Directive should include:
A description of how the assessment was undertaken including any difficulties (such as technical deficiencies or lack of know-how) encountered in compiling the required information'

Annex 1 (h)

3.1.2 The appraisal was carried out by scoring the likely impacts of the DPD policies against the SA objectives included in Table 7 in Section 4 below. The SA Framework consists of 17 objectives against which the DPD has been appraised.

3.1.3 The appraisal took into account the sustainability context and evidence base, plus knowledge of the Thurrock area, meetings with the Council's planning team and other information provided by Thurrock council.

3.1.4 The performance of the policies against each objective was given a score according to the criteria set out in **Table 5** below.

Table 5: Scoring criteria

Scoring Symbol	Meaning
++	Significant positive benefit
+	Some positive benefit
0	No significant effect
X	Some adverse effect
XX	Significant adverse effect
?	Uncertain or insufficient information on which to determine effect

3.1.5 When determining the likely significance of effects, consideration was given to the characteristics of the effects and the sensitivity of the receptors involved. For example, the following can all determine whether effects may be significant:

- Probability, duration, frequency and reversibility of effects;
- Cumulative nature of effects;
- Magnitude and spatial extent of the effects; and
- Value and vulnerability of area likely to be effected.

3.2 Difficulties encountered

- 3.2.1 A key issue in undertaking the appraisal of the DPD was the strategic nature of the document and the uncertainty surrounding precisely how its aspirations would be implemented on the ground and the degree to which they would be achieved in practice (particularly since many different partners are involved in its delivery). A key assumption was made that the policies in the Core Strategy would be fully implemented (i.e. they were taken at 'face value'). However, having said this, where tensions between priorities were evident or it appeared clear that full implementation would be problematic, or involve trade-offs, we have done our best to highlight these.

4 Stage A Findings

4.1 Introduction

- 4.1.1 Stage A of the SA process involved gathering evidence regarding the sustainability baseline and policy context for Thurrock. This evidence was used to inform the subsequent appraisal of the DPD. In addition, from the consideration of evidence a number of key sustainability objectives for Thurrock emerged. These objectives are the key benchmarks against which the sustainability effects of the LDF can be assessed. Together, the objectives can be considered to be the 'SA framework' which has been included in Table 7 below. The framework and evidence base for the SA of the DPD are documented in a Scoping Report, which was published in September 2005 and updated in 2007.
- 4.1.2 An overview of the key findings from Stage A is presented below. This includes a brief summary of further evidence and policy that has become available since the previous update in 2007.

4.2 The sustainability context (Task A1)

- 4.2.1 Task A1 of Stage A involves establishing the sustainability context by reviewing policies, plans, programmes, strategies and initiatives (PPPSI) that identify sustainability opportunities and challenges of relevance to the DPD and the SA. Establishing the sustainability context also helped to identify sustainability issues in Thurrock (see SA Task A3 below).
- 4.2.2 The requirement to undertake review of the sustainability context arises from the SEA Directive:

The 'Environmental Report' required under the SEA Directive should include:

"an outline of the contents, main objectives of the plan or programme and relationship with other relevant plans and programmes"

and

"the environmental protection objectives, established at international, Community or Member State level, which are relevant to the plan or programme and the way those objectives and any environmental considerations have been taken into account during its preparation"

(Annex 1(a) and (e))

Key messages from the policy review

- 4.2.3 An update of the sustainability context was undertaken as part of the SA of the Preferred Options Core Strategy in December 2007. The key messages from this review are shown in **Table 6** below.

Table 6: Key messages from 2007 policy review

Topic	Key messages
Economy and employment	<ul style="list-style-type: none"> Facilitate economic growth and development of new and existing businesses and actively encourage hi-tech businesses; Encourage and promote sustainable tourism; and Maintain and enhance viability and vitality of shopping centres.
Sustainable Land Use	<ul style="list-style-type: none"> Ensure efficient use natural resources, particularly water. Also previously developed land should be reused wherever possible, in order to protect key environmental resources (agricultural land, threatened habitats, mineral and historic resources etc); Ensure a higher quality public realm with every new project adding value to public places; Direct development to Brownfield land which has good public/mass transport access; Reduce dependence on commuting to work and reliance on private car; support integration of modes of transport and integration of land uses with transport; and Reduce waste arisings and increase the reuse / recycling / recovery of waste.
Biodiversity, Flora and Fauna	<ul style="list-style-type: none"> Ensure efficient use natural resources including water and land, reusing previously developed land wherever possible, in order to protect key environmental resources (agricultural land, threatened habitats, mineral and historic resources etc) Preserve and enhance the Green Grid of open space Protect & enhance rare landscapes and habitats, trees (including individual trees) and biodiversity Promote the incorporation of beneficial biodiversity features within and around new developments Promote development outside designated sites of regional and local nature conservation Importance
Air Quality and Noise	<ul style="list-style-type: none"> The potential withdrawal of the 2010 air quality limit for PM10 and the potential introduction of an air quality limit for PM2.5 (PM2.5 is a finer fraction of particulate matter than PM10); a move away from the universal achievement of prescribed Limit Values and a move towards assessments based on benefit to the wider community; and changes to the way the contribution of 'background' pollution is calculated, that has implications for achievement of PM10 limit values in south eastern England.
Cultural Heritage, Landscape and Material Assets	<ul style="list-style-type: none"> Use land efficiently, reusing previously developed land wherever possible, in order to protect key environmental resources (agricultural land, threatened habitats, mineral and historic resources etc); Protect & enhance rare landscapes, trees including individual trees and biodiversity; Ensure a higher quality public realm with every new project adding value to public places; Use natural resources including water land efficiently, reusing previously developed land wherever possible, in order to protect key environmental resources (agricultural land, threatened habitats, mineral and historic resources etc); Preserve and enhance the green grid of open space; Increase the supply of housing and provide for a better mix of dwelling sizes, tenure & types with a range of housing densities; and Maintain and enhance viability and vitality of shopping centres.
Water	<ul style="list-style-type: none"> Use natural resources including water and land efficiently, reusing previously developed land wherever possible, in order to protect key environmental resources (agricultural land, threatened habitats, mineral and historic resources etc);

Topic	Key messages
	<ul style="list-style-type: none"> • Manage the location of development in order to reduce the risk of flooding; require sustainable urban drainage systems; and • Promote healthy living, sense of well-being and reduce risk from environmental pollution.
Climatic Factors	<ul style="list-style-type: none"> • Increase the proportion of energy generated from renewable sources; and • Reduce dependence on commuting to work and reliance on private car; support integration of modes of transport and integration of land uses with transport.
Population and Social Equity	<ul style="list-style-type: none"> • Increase the supply of housing and provide for a better mix of dwelling sizes, tenure & types with a range of housing densities; • Provide additional accommodation for Traveller / Gypsy populations as may be needed; • Address pockets of deprivation; • Maintain and enhance viability and vitality of shopping centres; • Improve transport choice and personal security when travelling regardless of age, income and mobility; • Ensure adequate access to goods and services for all current and future residents; • Take into consideration the regeneration context of the Thames Gateway; • Apply a gendered perspective to regeneration, to consider women's exclusion from the labour market, services and social activities; • Address gender –specific concerns, including the need for gender-specific support services and to address gender-specific barriers to employment for women; • Ensure BME children are not disadvantaged in their access to education as a result of racial harassment, unfair admissions policies and lack of BME teachers in schools; • Address hate crimes, violence against women, race and disability discrimination in policing and ensure support to the specific needs of BME families and disabled people in social services provision; • Promote participation of all community groups, including disabled people, in sport at the highest levels • Ensure that all services meet the needs of the BME population and disabled people and address barriers to accessing services; • Ensure that a fair proportion of affordable housing allocations are made to BME applicants and ensure preventative and strategic work to address homelessness of disabled persons and quality of housing; • Tailor regeneration activity to respond to the needs of BME communities and to tackle inequality and disadvantage; and • Identify and address barriers to employment to attract BME people and disabled people into local jobs.
Access to Services	<ul style="list-style-type: none"> • Improve access to Open Space is the issue rather than quantity; this may be linked to a poor distribution of open space; • Increase the quantity of facilities and services particularly community centres in the borough and address the problem of poor access to the existing centres; and • Address the current poor provision of public transport and increase pedestrian and cycle accessibility.
Housing	<ul style="list-style-type: none"> • Use urban areas for housing development where possible – unless addressing particular rural needs; • Increase the supply of housing and provide for a better mix of dwelling sizes, tenure & types with a range of housing densities; and • Provide additional accommodation for Traveller / Gypsy populations as may be needed.

Topic	Key messages
Crime and the Fear of Crime	<ul style="list-style-type: none"> • Need to assist in reducing crime, anti social behaviour and the fear of crime.
Human Health	<ul style="list-style-type: none"> • Promote healthy living, sense of well-being and reduce risk from environmental pollution; and • Address pockets of deprivation.
Soil and Waste	<ul style="list-style-type: none"> • Use natural resources including water and land efficiently, reusing previously developed land wherever possible, in order to protect key environmental resources (agricultural land, threatened habitats, groundwater and surface water resources, mineral and historic resources etc); • Reduce waste arisings and increase the reuse / recycling / recovery of waste; • Direct development to Brownfield land, which has good public/mass transport access; and • Pursue use of redundant quarries, sand and gravel pits and landfill sites as new multifunctional greenspaces.

Update of the policy review

4.2.4 Since the SA Report of the Core Strategy Preferred Options was published in 2007 a number of new policies, plans, programmes, strategies and initiatives (PPPSI) have emerged. As part of this SA report, we have reviewed the key implications of these new PPPSIs for the DPD. The findings of this review have been included in Appendix 2.

4.3 The sustainability baseline (Task A2)

4.3.1 The baseline review focuses on collecting relevant information to inform the appraisal. The aim of the baseline review is also to help identify sustainability issues for Thurrock (see SA Task A3 below). It can also suggest indicators and thresholds that can aid the assessment of effects and suggest appropriate monitoring indicators. The baseline review also enables the identification of trends which aid in setting out the 'business as usual' or likely future baseline without the plan as required by the SEA Directive.

4.3.2 The SEA Directive's requirements in relation to baseline information are:

The 'Environmental Report' required under the SEA Directive should include:

"the relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan or programme"

"the environmental characteristics of areas likely to be significantly affected"

(Annex 1(b) and (c))

4.3.3 The updated sustainability baseline for Thurrock has been presented in the thematic Sections 8 to 21.

The 'future baseline' without the plan – the 'business-as-usual' scenario

- 4.3.4 It is difficult to accurately forecast the 'future baseline' without the DPD particularly because there are a number of programmes, schemes, and initiatives which are and will influence development within Thurrock over the plan period. However, some trends can be identified.
- 4.3.5 In terms of economic and housing regeneration, the Thurrock Thames Gateway Development Corporation (TTGDC) is an Urban Development Corporation (UDC) established with the remit to facilitate the growth, development and regeneration of Thurrock. Many of the Masterplans, Strategies and Frameworks that the TTGDC has developed between 2005 and present day inform the DPD. Therefore, it can be assumed that the levels of delivery of housing and employment space which act as an enabler of regeneration would be achieved without the DPD. However, the DPD plays a key role in establishing spatial framework for the entire borough and for the management of all development across the borough. Without the DPD it is likely that the development of Thurrock would not proceed in a holistic manner both in terms of how the different parts of the authority developed in a complementary way or how development considered wider social, economic and environmental elements.
- 4.3.6 The current low rates of housing delivery are cause for concern and without the DPD and the strategic direction it provides there is no reason to expect these to improve. This would have a related impact on the numbers of affordable homes delivered, thus increasing concerns over affordability in the area. The lack of an infrastructure delivery schedule would also mean that without the DPD there would be further delays to the key infrastructure which is needed to support and help deliver regeneration.
- 4.3.7 The delivery of the Government's objectives related to transport are not likely to be achieved without the DPD. In particular, the emissions reductions that are needed from the transport sector would not be met and improving accessibility, in itself a key enabler of regeneration, would not be delivered. It is likely that the correct phasing and sequencing of development would not be properly aligned with transport, resulting in sub-optimal regeneration impacts and increased traffic congestion and lower levels of air quality.
- 4.3.8 Managing the risks of tidal, fluvial and surface water flooding would not be as successful without specific measures and policies included in the DPD. It is also unlikely that renewable energy targets in residential and commercial developments would be achieved. Development pressure on greenfield and the green belt would continue to be experienced without the strategic directions of growth that would be provided by a DPD.
- 4.3.9 Without the plan it is also likely that there would be further stress on community services and facilities.

4.4 Sustainability issues (Task A3)

- 4.4.1 Task A3 involves drawing on the evidence gathered in Tasks A1 and A2 to identify those sustainability issues that are most pressing for Thurrock. The sustainability issues identified then formed the basis for the SA framework (Task A4). Furthermore, the sustainability issues are a useful source of evidence to draw upon at the assessment stage.
- 4.4.2 The requirement to identify sustainability issues arises from the SEA Directive:

The 'Environmental Report' required under the SEA Directive should include:

"any existing environmental problems which are relevant to the plan or programme including, in particular, those relating to any areas of a particular environmental importance, such as areas designated pursuant to Directives 79/409/EEC [the 'Birds Directive'] and 92/43/EEC [the 'Habitats Directive']"

(Annex 1(d))

- 4.4.3 As with the sustainability baseline, the sustainability issues for Thurrock are presented within the appropriate thematic chapters (Sections 8 to 21).

4.5 Developing the SA Framework (Task A4)

- 4.5.1 The SA objectives were developed primarily by drawing on the sustainability issues identified through Task A3, but also taking account of other evidence gathered through Tasks A1 and A2. **Table 7** sets out the SA Objectives and sub-objectives identified for Thurrock.

Table 7: SA framework

Thurrock SA Objective	SA Sub-objectives
1. To attain sustainable levels of prosperity and economic growth	1.1 Generate diverse new jobs for the region?
	1.2 Support and encourage the growth of small and medium size business?
	1.3 Ensure everyone can afford a good standard of living?
	1.4 Reduce vulnerability to climate change and exploit any benefits?
2. To increase economic diversity and increase the proportion of skills represented	2.1 Encourage innovation?
	2.2 Provide a satisfying job or occupation for everyone who wants one?
	2.3 Encourage the provision of more locally based skills and facilities?
3. To encourage investment and to ensure that current and future residents want to live and work within the borough	3.1 Encourage inwards investment?
	3.2 Diversify the economy, increase resilience to external shocks?
	3.3 Increase manufacturing?
	3.4 Encourage new business startups?
4a. To deliver sustainable patterns of location of development including employment and housing.	4.1 Minimise the development of Greenfield land?
	4.2 Improve management of the impacts of access and recreation?
	4.3 Provide opportunities for people to come into contact with and appreciate wildlife and wild places?
	4.4 Encourage more shops, better services in town centres?

Thurrock SA Objective	SA Sub-objectives
	4.5 Encourage more people to live in town centres?
	4.6 Improve access to green space?
	4.7 Improve the quality and quantity of publicly accessible greenspace?
	4.8 Encourage a feeling of community spirit?
	4.9 Enhance historic character, streetscape and townscape to strengthen sense of place?
	4.10 Encourage alternative uses to the car?
4.b Minimise risk of flooding taking account of climate change?	
5.To make the best use of land in the borough, including reuse of previously developed land.	5.1 Development land with least environmental / amenity value?
	5.2 Reduce vacant buildings and derelict land?
	5.3 Create attractive environments in built up areas?
	5.4 Create high quality design?
6. To protect and enhance Thurrock's biodiversity and geodiversity, including all designated sites.	6.1 Protect brownfield biodiversity?
	6.2 Maintain and enhance BAP Habitats and species in line with Borough and National targets?
	6.3 Protect and enhance habitats and wildlife taking account of climate change?
	6.4 Restore the full range of characteristic habitats and species to viable levels?
	6.5 Protect and enhance important coastal assets?
	6.6 Protect the borough's mineral resources?
	6.7 Conserve or enhance significant geological sites?
7. To protect and enhance the environment through reducing the emissions of pollutants.	7.1 Reduce any sources of pollution particularly from HGVs?
	7.2 Improve the water quality of rivers and groundwater supplies?
	7.3 Maintain 'good' water quality whilst accommodating new development discharge?
	7.4 Achieve good air quality, especially in urban areas?
	7.5 Reduce noise?
8. Protect and enhance landscape character, local distinctiveness and historic built heritage	8.1 Recognise and protect historic landscape character?
	8.2 Maintain / enhance built and historic character?
	8.3 Protect designated and undesignated historic sites and areas of significance?
	8.4 Conserve and enhance regional diversity and local distinctiveness?
9. Ensure that water consumption and water sources can accommodate future development.	9.1 Limit water consumption to levels that continue to support wetland habitat and rivers?
	9.2 Ensure settlements can absorb growth without damage to character?
10. To reduce consumption of non-renewable energy sources and to use the available natural resources in the most efficient and sustainable manner.	10.1 Minimise need for energy?
	10.2 Increase energy efficiency?
	10.3 Increase renewable share of energy?
	10.4 Reduce need for car and road based freight transport?

Thurrock SA Objective	SA Sub-objectives
	10.5 Minimise the demand for raw materials?
	10.6 Reduce water use, maintain water security despite climate change?
	10.7 Limit water consumption to levels supportable by natural processes and storage systems, taking into account the impact of climate change?
	10.8 Maintain water environment whilst meeting demand from development?
	10.9 Encourage farming practices sensitive to the character of the countryside; maintain soil quality?
	10.10 Reduce minerals and resources extracted and imported?
	10.11 Use materials from sustainable sources?
	10.12 Encourage local production to be consumed in the borough?
	10.13 Increase farmers markets and local trading schemes?
11. To achieve a more equitable sharing of the benefits of prosperity across all sectors of society.	11.1 Reduce disparities in income levels?
	11.2 Access to services and facilities for all?
	11.3 Create opportunities for unemployed, especially long-term disabled?
	11.4 Help low income groups / especially children in low income families?
	11.5 Improve ethnic / cultural mutual understanding?
	11.6 Encourage development of social enterprises?
12. Ensure fairer access to services, focusing on the most deprived areas.	12.1 Provide more equal access to opportunities?
	12.2 Contribute to local regeneration, help deprived areas?
	12.3 Increase access to leisure facilities (inc woodland, parks)?
	12.4 Improve the quality & quantity of publicly accessible greenspace?
	12.5 Provide opportunities for people to come into contact with and appreciate wildlife and wild places?
	12.6 Retain village services?
	12.7 Encourage entrepreneurial activity in disadvantaged areas?
	12.8 Encourage community involvement in service design and provision?
13. To provide housing to all those in the borough in need.	13.1 Increase access to decent and affordable housing?
14. To reduce crime and the fear of crime.	14.1 Reduce crime rates?
15. To reduce inequalities in health and ensure all current and future residents have access to health facilities.	15.1 Promote healthy lifestyles?
	15.2 Reduce health inequalities?
16. To reduce the amount of waste produced and the amount of waste being imported.	16.1 Reduce waste generated, reuse / recycle / use recycled?
	16.2 Minimise the production of waste?
	16.3 Reduce the amount of waste imported?

5 Testing the DPD's Objectives against the SA Framework (Task B1) and Consideration of Alternatives (Task B2)

- 5.1.1 This section tests the compatibility of the DPD objectives against the SA framework (Task B1). This section also describes how alternatives to meeting the DPD objectives have been developed by the Council through the plan making process and how these have been appraised (Task B2).
- 5.1.2 The requirement to test the DPD objectives against the sustainability appraisal objectives is described in the CLG Plan making manual⁹ which replaces the previous Government guidance on SA of LDFs.
- 5.1.3 The requirement to undertake the appraisal of alternatives arises from the SEA Directive:

The 'Environmental Report required under the SEA Directive should include:

"an outline of the reasons selecting the alternatives dealt with, and a description of how the assessment was undertaken including any difficulties (such as technical deficiencies or lack of know-how) encountered in compiling the required information"

(Annex 1(h))

5.2 Testing the DPD Objectives against the SA Framework (Task B1)

- 5.2.1 The strategic objectives of the DPD set out what it is aiming to achieve in spatial planning terms and set the context for the development of the borough. It is important for the objectives of the DPD to be in accordance with sustainability principles. With this in mind, guidance¹⁰ recommends that the objectives should be tested for compatibility with the SA objectives. The DPD objectives also need to be compatible with each other, and the SA objectives will be one way of checking for this.
- 5.2.2 The Guidance suggests using a matrix to compare the plan objectives with the SA objectives. The DPD sets out 19 strategic objectives, the complete text for which can be found in Appendix 3. The compatibility of these objectives with the SA objectives is illustrated in **Table 8** and discussed below.

⁹ CLG (no date). *Plan making manual: refining options and assessing effects* [online] available at: <http://www.pas.gov.uk/pas/core/page.do?pageld=156210> (accessed 4 February 2010).

¹⁰ CLG (no date). *Plan making manual: refining options and assessing effects* [online] available at: <http://www.pas.gov.uk/pas/core/page.do?pageld=156210> (accessed 4 February 2010).

Table 8: Comparison table to test the compatibility of the Core Strategy strategic and SA objectives

DPD Strategic objective SA objective	SS01 – Achieve sustainable communities	SS02 – Increase prosperity and employment growth	SS03 – Support local businesses, attract inward investment and diversify economy	SS04 – Provide sufficient sustainable housing and provide a housing mix	SS05 – Create a safe, healthy, accessible and inclusive environment	SS06 – Secure and provide health, education and other community facilities	SS07 – Plan for provision of transport and utility infrastructure	SS08 – Maintain existing local centres and providing some new local facilities	SS09 – Promote participation and pride in culture and sport, leisure and recreation	SS010 – Provide a safe transport system	SS011 – Sustain and enhance the open character of the Green Belt	SS012 – Protect and enhance the natural, historic and built environment	SS013 – Develop the Greengrid network	SS014 – Promote sustainable development	SS015 – Ensure an adequate supply of minerals	SS016 – Achieve a reduction of waste	SS017 – Minimise the impact of climate change	SS018 – Reduce and manage flood risk to and from development	SS019 – Safeguard and enhance the riverside and coastal land
1. To attain sustainable levels of prosperity and economic growth.	+	+	+	+	0	0	+	+	0	+	0	0	0	+	0	0	0	0	+
2. To increase economic diversity and increase the proportion of skills represented.	+	+	+	?	0	+	+	+	0	0	0	0	0	0	0	0	0	0	0
3. To encourage investment and to ensure that current and future residents want to live and work within the borough.	+	+	+	+	+	+	+	+	+	+	0	+	+	0	0	0	+	+	+
4a. To deliver sustainable patterns of location of development including employment and housing	+	+	+	+	0	+	+	+	0	0	?	?	?	+	0	0	0	+	+
4b. Minimise risk of flooding taking account of climate change?	-	-	0	0	+	-	?	0	0	0	-	+	+	?	0	0	+	+	+
5. To make the best use of land in the borough, including reuse of previously developed land.	+	+	+	0	0	+	+	0	+	0	0	+	+	+	+	+	0	+	+

DPD Strategic objective	SA objective	SS01 – Achieve sustainable communities	SS02 – Increase prosperity and employment growth	SS03 – Support local businesses, attract inward investment and diversify economy	SS04 – Provide sufficient sustainable housing and provide a housing mix	SS05 – Create a safe, healthy, accessible and inclusive environment	SS06 – Secure and provide health, education and other community facilities	SS07 – Plan for provision of transport and utility infrastructure	SS08 – Maintain existing local centres and providing some new local facilities	SS09 – Promote participation and pride in culture and sport, leisure and recreation	SS010 – Provide a safe transport system	SS011 – Sustain and enhance the open character of the Green Belt	SS012 – Protect and enhance the natural, historic and built environment	SS013 – Develop the Greengrid network	SS014 – Promote sustainable development	SS015 – Ensure an adequate supply of minerals	SS016 – Achieve a reduction of waste	SS017 – Minimise the impact of climate change	SS018 – Reduce and manage flood risk to and from development	SS019 – Safeguard and enhance the riverside and coastal land
6. To protect and enhance Thurrock's biodiversity and geodiversity, including all designated sites.	?	0	?	?	+	0	?	0	0	0	+	+	+	+	?	0	0	+	+	
7. To protect and enhance the environment through reducing the emissions of pollutants.	+	?	0	?	+	0	+	0	0	+	0	0	0	+	0	0	0	+	0	0
8. Protect and enhance landscape character, local distinctiveness and historic built heritage	+	0	0	?	+	0	0	?	?	0	+	+	+	0	0	0	0	0	0	+
9. Ensure that water consumption and water sources can accommodate future development.	?	?	?	?	0	0	+	?	0	0	0	0	0	+	0	0	0	0	0	0
10. To reduce consumption of non-renewable energy sources and to use the available natural resources in the most efficient and sustainable manner.	+	?	?	?	+	0	+	?	0	+	0	0	0	+	0	0	0	+	0	0
11. To achieve a more equitable sharing of the benefits of prosperity across all sectors of society.	+	+	+	+	+	+	+	+	+	+	0	0	0	0	0	0	0	0	0	+
12. Ensure fairer access to services, focusing on the most deprived areas.	+	+	+	0	0	+	+	+	+	+	+	0	0	+	0	0	0	0	0	+

DPD Strategic objective																			
SA objective	SS01 – Achieve sustainable communities	SS02 – Increase prosperity and employment growth	SS03 – Support local businesses, attract inward investment and diversify economy	SS04 – Provide sufficient sustainable housing and provide a housing mix	SS05 – Create a safe, healthy, accessible and inclusive environment	SS06 – Secure and provide health, education and other community facilities	SS07 – Plan for provision of transport and utility infrastructure	SS08 – Maintain existing local centres and providing some new local facilities	SS09 – Promote participation and pride in culture and sport, leisure and recreation	SS010 – Provide a safe transport system	SS011 – Sustain and enhance the open character of the Green Belt	SS012 – Protect and enhance the natural, historic and built environment	SS013 – Develop the Greengrid network	SS014 – Promote sustainable development	SS015 – Ensure an adequate supply of minerals	SS016 – Achieve a reduction of waste	SS017 – Minimise the impact of climate change	SS018 – Reduce and manage flood risk to and from development	SS019 – Safeguard and enhance the riverside and coastal land
13. To provide housing to all to all those in the borough in need.	+	0	0	+	0	0	0	0	0	0	?	0	0	0	0	0	0	0	0
14. To reduce crime and the fear of crime.	+	0	0	0	+	+	0	0	+	0	0	0	0	0	0	0	0	0	0
15. To reduce inequalities in health and ensure all current and future residents have access to health facilities.	+	+	+	+	+	+	+	+	+	+	0	0	+	0	0	0	0	+	+
16. To reduce the amount of waste produced and the amount of waste being imported.	?	?	?	-	0	0	0	?	0	0	0	0	0	+	+	+	0	0	0

Key	
+	Compatible
?	Compatibility unclear
-	Not compatible
0	Not applicable

Results of the compatibility testing

- 5.2.3 The majority of the DPD strategic objectives are compatible or neutral with the SA objectives, with a few exceptions discussed below.
- 5.2.4 Most of the DPD's strategic objectives are compatible with SA objectives 1 to 3 which deal with economic growth, diversity and investment. There is uncertainty surrounding strategic objective SS04. Dependent upon the housing mix delivered under this objective, it could increase homes for a more diverse working community and more key worker housing, thus increasing economic diversity and the proportion of skills represented.
- 5.2.5 The DPD's strategic objectives are mostly compatible with SA objective 4 (sustainable patterns of location) but there are some uncertainties. The delivery of sustainable patterns of location of development could be difficult to balance with sustaining and enhancing the Green Belt (SS011) where development will be restricted – this is similarly the case for SA objective 13 to provide housing for those in need. It can also conflict with strategic objectives to protect and enhance the natural, historic and built environment (SS012) and for the Greengrid network (SS013) and will again depend upon careful balancing and the delivery of these objectives.
- 5.2.6 Several DPD objectives are not compatible with SA objective 4b (flood risk). The locations set out in SS01 (sustainable communities), SS02 (increased prosperity and employment growth) and SS06 (community facilities) include areas at risk of flooding and this will require mitigation e.g. through development and building design. The Green Belt (SS013) is not within an area of flood risk, and therefore not developing in this area is incompatible with an SA objective to minimise risk of flooding. Uncertainty surrounds the location of transport and utility infrastructure (SS07) where there could be a risk of flooding and it will need to be flood resilient. SS014 could potentially be compatible with the SA objective, if sustainable design such as use of Sustainable Urban Drainage systems (SUDs) were to include mitigation of flood risk.
- 5.2.7 There are a number of uncertainties in relation to the compatibility of the DPD strategic objectives and SA objective 6 (to protect biodiversity and geodiversity) in relation to objectives that promote an increase in economic activities and resource extraction.
- 5.2.8 Employment growth (SS02) and housing provision (SS04) could result in increased emissions of pollutants and possibly diversification in to polluting industries, thus there is uncertainty in relation to its compatibility with SA objective 7 (reducing pollution).
- 5.2.9 The location and design of transport and utility infrastructure (SS07) will require careful consideration of impact on landscape character and historic built heritage (SA objective 8). Promoting participation and pride in culture and sport, leisure and recreation (SS09) and maintaining local centres and adding new facilities (SS08) could enhance protection and investment in landscape character and historic assets and should promote local distinctiveness; however it may result in a strain of landscape and historic assets if not properly managed.
- 5.2.10 Employment growth (SS02) and a diversified economy of new businesses (SS03) are likely to increase water consumption and these strategic objectives could therefore be incompatible with SA objective 9. Sustainable communities (SS01) and a mix of sustainable housing (SS04) could imply progress towards water neutrality, however, increasing density could have an impact on water availability. However, if the phasing of development and jobs considers new resource provision then this could be avoided.

- 5.2.11 There are several uncertainties in relation to the compatibility of several DPD strategic objectives and the SA objective 10 (reduce consumption of non-renewable energy and natural resources). Appropriate resource management will be important in relation to objectives SS02 to SS04 and SS08.
- 5.2.12 It is uncertain whether the DPD objective that aims to protect the green belt from development (SS011) is compatible with SA objective 13 (to provide housing to all in the borough in need).
- 5.2.13 Several DPD objectives may lead to an increase in waste in the borough. However, this could be mitigated by better waste management.

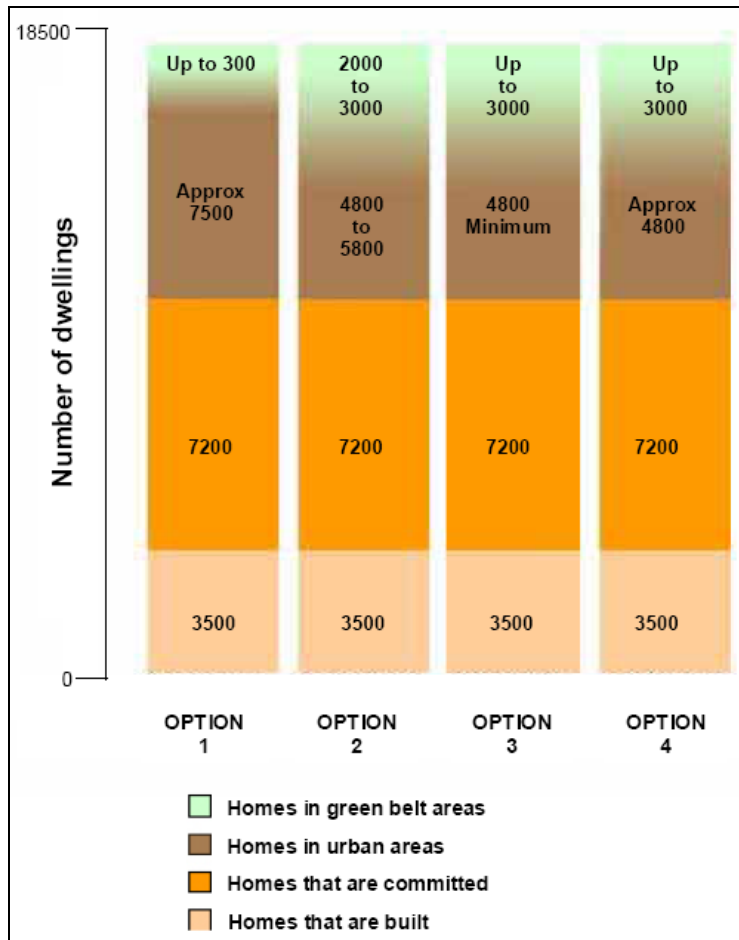
5.3 Consideration of Alternatives (Task B2)

- 5.3.1 The preparation of the Proposed Submission DPD has been preceded by a series of draft stages where the Council has considered a number of reasonable alternative approaches to achieving the vision and objectives of the DPD. These alternatives refer to both strategic spatial options as well as different thematic and development control policies.
- 5.3.2 Alternatives were appraised at the Issues and Options (2006) and Preferred Options (2007) stages. At each of these stages, the findings of the SA informed the development of Thurrock's policies and the final wording and content of policies (also see section 1.7). The stages at which spatial alternatives were considered and a summary of results are summarised below:

Issues and Options (2006)

- 5.3.3 Four scenarios or options (shown in **Figure 3**) were considered for delivering future growth in Thurrock plus a 'business-as-usual' option defined as the continuation of the baseline situation. The scenarios included different distributions of dwellings in green belt areas, urban areas, existing allocations, etc. A summary of the four options are:
- Option 1: Growth concentrated within the urban areas
 - Option 2: Grays urban fringe land release – most growth within urban areas
 - Option 3: Expanded smaller settlement; [A] Ockendon or [B] East Tilbury or [C] Corringham & Stanford-Le- Hope or [D] (land to south of West Horndon Rail station)
 - Option 4: Highly dispersed green belt option

Figure 3: Growth options



5.3.4 These options underwent SA and a combination of Options 1 and Options 2 was recommended. Option 2 was identified by the Council as the preferred growth delivery scenario. Please see below the appraisal results, SA recommendation and Council's decision and rationale for their choice of growth option.

Table 9: Growth options

Summary of option		Option 1	Option 2	Option 3	Option 4	Option 5 (business-as-usual)
Summary of SA findings	SA objective	Score	Score	Score	Score	Score
	1) Economic growth	(++)	(++)	(+)	(+)	(+)
	2) Economic diversity	++	++	++	++	+
	3) Investment	++	++	++	++	++
	4) Sustainable locations	+++/-	+++/-	++/-	++/-	++/-
	5) Land use	+++/-	+++/-	++/-	++/-	+++/-
	6) Biodiversity	++/-	++/-	++/-	++/-	+/-
	7) Emissions & pollutants	-	-	--	--	-
	8) Cultural heritage	++	++	+/-	+/-	++
	9) Water consumption	--	--	---	---	--
	10) Natural resources	+	+	+	+	+
	11) Equality	+++	+++	++	++	++/?
	12) Access to services	+++(-)	+++(-)	++(-)	++(-)	++(-)
	13) Housing	+++	+++	+++	+++	++
	14) Crime	(+)	(+)	(+)	(+)	0
	15) Health	+	+	+	+	+
16) Waste	-	-	--	--	-/0	
SA Recommendation	<p>Acknowledging the drivers behind the scale of the regeneration of Thurrock, it is important to ensure that the growth option chosen as a vehicle to deliver this growth is the most appropriate. Furthermore it is important to identify areas where, through mitigation an Option may be made more sustainable. With this in mind, in order to address the deprivation of the urban areas, utilising existing infrastructure and following the Governments guidance would seem an appropriate way forward, which would imply Option 1 as a sustainable option. However, the release of small pockets of greenbelt - in order to address pockets of deprivation, cope with Flood risk and possibly offer alternative sites should brownfield biodiversity prevent the site form being usable - should also be an option. Therefore, an option balanced between Option 1 and Option 2 is favoured.</p>					

Choice of option and rationale for choice	<p>the Spatial Options ranged from an almost 100% PDL housing Option 1 focusing on the Thurrock urban Area (TUA), Option 2 focused on the TUA with some very limited Green Belt release, through to a more dispersed Options 3 & 4 that still retained the majority of housing allocations in the TUA but did allow for the possibility of up to a maximum of 3000 dwellings in the Green Belt out of a total of 18500. Through analysis of Representations received, Options 3 & 4 were soundly rejected by the EERA, Essex CC, Go-East, the Thurrock public, government agencies, utility providers and many developers who had interests in the west of the Borough. Options 3 & 4 were only supported by those developers who had unsuccessfully argued for the Eastern Growth Pole concept at the EEP Panel Inquiry.</p> <p>Thurrock's evidence base such as the Urban Capacity Study and Employment Land review demonstrated that Thurrock can accommodate the great majority of planned housing, employment and associated development on brownfield sites with certain development parameters. It was also determined that some Greenfield land may be needed depending on various factors including the average densities achieved on Brownfield sites</p> <p>The SA Report also concluded that Options 1 & 2 or a combination of both were the more sustainable choices., as these options displayed a higher degree of positive scores and a lesser volume of negative scores. Options 1 and 2 were the more socially, economically and environmentally acceptable spatial approaches for the future of Thurrock.</p> <p>Following the outcome of the SA carried out and the Councils evidence the council concluded that Option 1 would not preclude Green Belt release in its entirety as there will be particular cases where 'very special circumstances' prevail to warrant Green Belt land release and as such the councils preferred option was based broadly on option 2 with an additional local scale of Green Belt land release for housing.</p>
Link to relevant document(s)	<p>Core Strategy and Policies for Control of Development - Development Plan Document (DPD) "Issues and Options" consultation http://www.thurrock.gov.uk/planning/strategic/pdf/consult_corestrat_200607.pdf Interim SA Report http://www.thurrock.gov.uk/planning/strategic/pdf/isa_200607_report.pdf</p>

Options appraisal scoring symbols:

Symbol	Likely effect against the SA objective
+++	Strong and significant beneficial impact
++	Potentially significant beneficial impact
+	Policy supports this objective although it may have only a minor beneficial impact
0	1. Policy has no impact 2. Effect is neutral insofar as the benefits and drawbacks appear equal and neither is considered significant
?	Uncertain or insufficient information on which to determine base the assessment at this stage
-	Policy appears to conflict with the objective and may result in adverse impacts
--	Potentially significant adverse impact
---	Strong and significant adverse impact
()	Note that where brackets occur around scores, the sustainability outcome is unknown or dependant on the implantation of Policy as a 'lower' level of the planning hierarchy.

Preferred Options (2007)

5.3.5 During this stage reasonable alternative spatial options were set out in Chapter 6 of the Preferred Options DPD and public comment invited. Although the housing numbers on Green Belt sites release in Options 3/4 were reduced compared to the earlier Issues and Options stage it was judged that Option 2 was the preferred growth delivery scenario. As such it was considered that it would not add value to the appraisal process to reassess options 1, and 3/4 (as amended) since the substance of these had already been appraised. No reasonable alternatives to the proposed Spatial Policies were identified; however, alternatives were identified for the majority of thematic policies and policies for the management of development. No discrete set of policy alternatives was developed but alternatives for some aspects of policies were appraised. Please see below a summary of the appraisal results, SA recommendation and the Council's decision and rationale for their choice of option for those preferred options that included a spatial element.

Alternatives assessment symbols:

Symbol	Likely effect against the SA objective
+	Option will result in a positive impact on the SA objective
+?	The impact on the SA objective is dependent on implementation, but if there were to be an impact it would most likely be positive
0	Neutral or negligible effect
X?	The impact on the SA objective is dependent on implementation, but if there were to be an impact it would most likely be negative
X	Option will result in a negative impact on the SA objective
?	The relationship between the option and the SA objective is unknown, or there is not enough information to make an assessment
×	No relationship

Table 10: Preferred options appraisal: CSTP1 (Strategic Housing Provision)

	Preferred policy option	Policy option A	Policy option B	Policy option C	Policy option D	Policy option E	Policy option F	Policy option G	Policy option H
Summary of option	<p>The Council's preferred policy approach comprises 5 complementary elements :</p> <p>1) Housing Provision in Thurrock - minimum total build between 2007-2021 to 13,830</p> <p>2) Locational principles of housing development</p> <p>3) Thurrock's Housing density- between 35-70 dwellings per hectare</p> <p>4) Tenure mix and dwelling type- 65% market housing and 35% affordable housing</p> <p>5) Lifetime Homes and Special Needs Housing- 3% of new residential dwelling/unit developed to full</p>	<p>Significantly exceed the minimum housing provision target of an additional 13,830 dwellings from 2001 to 2021. Where additional brownfield sites come forward the Council will positively consider these as a contribution to overall housing land supply.</p>	<p>Housing Density - Business as usual. New residential development should achieve an overall average net density of 37 dwellings per hectare. This policy proposed a range of densities from 3070 dwellings per hectare.</p>	<p>Housing Density -Lower average net density than 37 dwellings per hectare but equal to or greater than the national indicative minimum target of 30 dwellings per hectare.</p>	<p>Housing Density - Greater average net density than 40 dwellings per hectare.</p>	<p>Housing Tenure Proportions - Reasonable alternatives include variations of the percentage of affordable and market housing with affordable housing exceeding 35%.</p>	<p>Lifetime Homes -Lower percentage of new housing dwellings/unit that conform to the Lifetime Homes Standards.</p>	<p>Special Needs Housing - a percentage e greater than that in the preferred option</p>	<p>Special Needs Housing - a percentage less than that outlined in the preferred policy</p>

		Preferred policy option	Policy option A	Policy option B	Policy option C	Policy option D	Policy option E	Policy option F	Policy option G	Policy option H
		wheelchair standard.								
Summary of SA findings		Score	Score	Score	Score	Score	Score	Score	Score	Score
	1) Economic growth	+/?	?	+/?	+/?	+/?	?	?	?	?
	2) Economic diversity	x	x	x	x	x	x	x	x	x
	3) Investment	+/?	?	?	?	?	+/?	?	?	?
	4) Sustainable locations	?	?	?	?	?	?	?	?	?
	5) Land use	+	+/?	+	+/?	+	+	+	+	+
	6) Biodiversity	X	X	X	X	X	X	X	X	X
	7) Emissions & pollutants	X	X	X?	X?	X?	X	X	X	X
	8) Cultural heritage	?	?	?	?	?	0	0	0	0
	9) Water consumption	X	X	X	X	X/?	X	X	X	X

	Preferred policy option	Policy option A	Policy option B	Policy option C	Policy option D	Policy option E	Policy option F	Policy option G	Policy option H
10) Natural resources	X	X	X	X	X/?	X	X	X	X
11) Equality	0/+	0	0/+	0/+	0/+	0/+	0/?	0/+	0/?
12) Access to services	?	?	?	?	?	?	X/?	?	X/?
13) Housing	+	+	+	+	+	+	+/?	+	+/?
14) Crime	+/?	+/?	?	?	?	+/?	?	?	?
15) Health	+/?	+/?	+/?	+/?	?	+/?	?	+/?	?
16) Waste	X	X	X/?	X	X?	X	X	X	X
Choice of option and rationale for choice	<p>Option A- There is no justification for seeking to significantly exceed the RSS target especially as the Secretary of State has confirmed that this should not be achieved by allocating additional Green Belt land. Option A was therefore rejected.</p> <p>Option B/C/D- The SHLAA (Technical evidence) assigned design led typology to each site assessed which produced a range of densities for each site pending on the site constraints, access and local context. The Council's proposed density approach is derived from the mid-range of densities, national policy and findings of the SHMA.</p> <p>Option E- Option rejected following outcome of both evidence base and consultation with key stakeholders. Details provided in Affordable Housing policy</p> <p>Option F(A) Lifetime Homes- Lower percentage rejected as this is contrary to the Housing Corporation's 'Wheelchair Housing Design Guidance'.</p> <p>Option F(B) Special Needs- Lower percentage rejected as this is contrary to the Housing Corporation's 'Wheelchair Housing Design Guidance'.</p>								

	Preferred policy option	Policy option A	Policy option B	Policy option C	Policy option D	Policy option E	Policy option F	Policy option G	Policy option H
Link to relevant document(s)	Core Strategy and Policies for Control of Development - Development Plan Document (DPD) "Preferred Options" consultation http://www.thurrock.gov.uk/planning/strategic/pdf/ldf_preferred_cs_200711.pdf SA of Preferred Options -Main Report: http://www.thurrock.gov.uk/planning/strategic/pdf/ldf_preferred_ear.pdf Technical appendices 1: http://www.thurrock.gov.uk/planning/strategic/pdf/ldf_preferred_ear_app1.pdf Technical appendices 2: http://www.thurrock.gov.uk/planning/strategic/pdf/ldf_preferred_ear_app2.pdf								

Table 11: Preferred options appraisal: CSTP8 (Retail and Town Centre Network)

		Preferred policy option	Policy option A
Summary of option		The preferred policy approach comprise of 4 elements: - Town Centre policy framework - Strategic distribution of retail development in the borough - Development anticipated within centres hierarchy - Assessment of proposals for major retail and other town centre uses.	Focus a higher percentage of total net additional retail floorspace in Grays and /or other Centres subject to PPS6 criteria
Summary of SA findings	SA objective		
	1) Economic growth	+	+
	2) Economic diversity	+	+
	3) Investment	+	+
	4) Sustainable locations	+	+
	5) Land use	+	+
	6) Biodiversity	X/?	X/?
	7) Emissions & pollutants	+/?	+/?
	8) Cultural heritage	+	+
	9) Water consumption	?	?
	10) Natural resources	?	?
	11) Equality	0/+	?
	12) Access to services	+/?	+
	13) Housing	+	+
	14) Crime	+/?	+/?
	15) Health	+	+
16) Waste	X	X	
Choice of option and rationale for choice	Option A rejected. The Submission policy is based on the Thurrock Retail Study and Lakeside Single Issue Report which provides the evidence base for floor space in Lakeside and Grays		
Link to relevant document(s)	Core Strategy and Policies for Control of Development - Development Plan Document (DPD) "Preferred Options" consultation http://www.thurrock.gov.uk/planning/strategic/pdf/ldf_preferred_cs_200711.pdf SA of Preferred Options -Main Report: http://www.thurrock.gov.uk/planning/strategic/pdf/ldf_preferred_ear.pdf Technical appendices 1: http://www.thurrock.gov.uk/planning/strategic/pdf/ldf_preferred_ear_app1.pdf Technical appendices 2: http://www.thurrock.gov.uk/planning/strategic/pdf/ldf_preferred_ear_app2.pdf		

Table 12: Preferred options appraisal: CSTP9 (Lakeside Shopping Centre and Wider Lakeside Basin)

		Preferred policy option	Policy option A	Policy option B	Policy option C
Summary of option		1)General strategy for diversification and enhancement 2)Retail floor provision- consider the expansion of Lakeside regional shopping centre to include some appropriate level of net additional retail floor space	No net additional new retail floorspace	Additional retail floorspace based on distribution in the Thurrock Retail Study	Facilitate additional retail floor-space development at Lakeside at a level proposed in the Retail Capacity Study produced by the Thurrock Thames Gateway Development Corporation
Summary of SA findings	SA objective	Score	Score	Score	Score
	1) Economic growth	+/?	?	+/?	+/?
	2) Economic diversity	+/?	?	+/?	+/?
	3) Investment	+/?	?	+/?	+/?
	4) Sustainable locations	X/?	?	X/?	X/?
	5) Land use	?	+/?	?	?
	6) Biodiversity	X	X/?	X	X
	7) Emissions & pollutants	X	0	X?	X
	8) Cultural heritage	?	0	?	?
	9) Water consumption	?	?	?	?
	10) Natural resources	X	?	X	X
	11) Equality	0/X	0	?	X
	12) Access to services	X/?	+	X/?	X/?
	13) Housing	x	x	x	x
	14) Crime	X/?	0	?	X/?
	15) Health	X	0	X	X
16) Waste	X	?	X	X	
Choice of option and rationale for choice	Option A, B and C- All options were rejected as they are not compliant with the Single Issue Review. The Single Issues Review granted 50,000sqm space.				
Link to relevant document(s)	Core Strategy and Policies for Control of Development - Development Plan Document (DPD) "Preferred Options" consultation http://www.thurrock.gov.uk/planning/strategic/pdf/ldf_preferred_cs_200711.pdf SA of Preferred Options -Main Report: http://www.thurrock.gov.uk/planning/strategic/pdf/ldf_preferred_ear.pdf Technical appendices 1: http://www.thurrock.gov.uk/planning/strategic/pdf/ldf_preferred_ear_app1.pdf Technical appendices 2: http://www.thurrock.gov.uk/planning/strategic/pdf/ldf_preferred_ear_app2.pdf				

Table 13: Preferred options appraisal: CSTP12 (Culture: The Arts and Community Facilities)

		Preferred policy option	Policy option A
Summary of option		1)Address the aspect of the Cultural strategy 2) Promote appropriate tourism facilities and attractions 3) Libraries, village halls and community centres 4) Facilities for performing and visual arts and museums 5) Promoting cultural industries and associated communities 6) Tourism, festival and attractions. ??	Specifically identify Cultural Quarters within Grays and Purfleet
Summary of SA findings	SA objective	Score	Score
	1) Economic growth	+	+
	2) Economic diversity	+	+
	3) Investment	+	+
	4) Sustainable locations	+	+
	5) Land use	+	+
	6) Biodiversity	x	x
	7) Emissions & pollutants	X/?	X/?
	8) Cultural heritage	+/?	+/?
	9) Water consumption	0/?	0/?
	10) Natural resources	X/?	X/?
	11) Equality	+	+
	12) Access to services	+/?	+/?
	13) Housing	x	x
	14) Crime	0	0
	15) Health	+	+
16) Waste	X	X	
Choice of option and rationale for choice	The Councils Preferred Policy option remains. Option A is very site specific and such detail would be more appropriately provided in the Site Allocations DPD.		
Link to relevant document(s)	Core Strategy and Policies for Control of Development - Development Plan Document (DPD) "Preferred Options" consultation http://www.thurrock.gov.uk/planning/strategic/pdf/ldf_preferred_cs_200711.pdf SA of Preferred Options -Main Report: http://www.thurrock.gov.uk/planning/strategic/pdf/ldf_preferred_ear.pdf Technical appendices 1: http://www.thurrock.gov.uk/planning/strategic/pdf/ldf_preferred_ear_app1.pdf Technical appendices 2: http://www.thurrock.gov.uk/planning/strategic/pdf/ldf_preferred_ear_app2.pdf		

Table 14: Preferred options appraisal: CSTP21 (Strategic Freight Movement and Access to Ports)

		Preferred policy option	Policy option A
Summary of option		<ul style="list-style-type: none"> - Give priority to rail freight investment - Safeguard wharves and rail freight facilities - Encourage the development of 24hr lorry parking provision - Promote the establishment of a freight quality partnership - Ensure that new development sites for freight handling will prepare sustainable distribution strategy. 	Encourage the relocation of freight-generating development / activity elsewhere in the region
Summary of SA findings	SA objective	Score	Score
	1) Economic growth	?	X/?
	2) Economic diversity	x	x
	3) Investment	0	X/?
	4) Sustainable locations	x	x
	5) Land use	x	x
	6) Biodiversity	0	0
	7) Emissions & pollutants	+/?	+/?
	8) Cultural heritage	X/?	0
	9) Water consumption	0	0
	10) Natural resources	+	+
	11) Equality	0	0/X
	12) Access to services	x	x
	13) Housing	x	x
	14) Crime	x	x
	15) Health	x	x
16) Waste	x	x	
Choice of option and rationale for choice	Option A rejected. The options for location of port-related development & activities to support expansion of Tilbury port are necessarily location-specific and fixed (Key Strategic Hubs).		
Link to relevant document(s)	Core Strategy and Policies for Control of Development - Development Plan Document (DPD) "Preferred Options" consultation http://www.thurrock.gov.uk/planning/strategic/pdf/ldf_preferred_cs_200711.pdf SA of Preferred Options -Main Report: http://www.thurrock.gov.uk/planning/strategic/pdf/ldf_preferred_ear.pdf Technical appendices 1: http://www.thurrock.gov.uk/planning/strategic/pdf/ldf_preferred_ear_app1.pdf Technical appendices 2: http://www.thurrock.gov.uk/planning/strategic/pdf/ldf_preferred_ear_app2.pdf		

Table 15: Preferred options appraisal: CSTP32 (River Thames)

		Preferred policy option	Policy option A	Policy option B
Summary of option		<ul style="list-style-type: none"> - Enhancement and improvement of the landscape and biodiversity assets and built heritage along the riverside - Improvement of the urban riverside environment within the Thurrock Urban area. - Access routes to and along the riverside - Greater use of the River Thames for transportation, recreation and appropriate forms of leisure activity - The protection of strategic and locally important view - Safeguarding of port-related operational land 	An alternative policy approach would be to identify and safeguard specific sites along the River Thames where future transport, riverside, recreation and leisure activity investment could be located.	Development of Buffer Zones between Port development and activity and nearby residential and other uses.
Summary of SA findings	SA objective	Score	Score	Score
	1) Economic growth	0/?	+/?	0
	2) Economic diversity	0	0	0
	3) Investment	0/?	+/?	0
	4) Sustainable locations	+/?	+/?	+/?
	5) Land use	+	+	?
	6) Biodiversity	+/?	+/?	+/?
	7) Emissions & pollutants	0	0	+/?
	8) Cultural heritage	+	+	0/?
	9) Water consumption	0	0	0
	10) Natural resources	?	?	?
	11) Equality	x	x	x
	12) Access to services	+/?	+/?	?
	13) Housing	x	x	x
	14) Crime	?	?	?
	15) Health	+	+	+
	16) Waste	x	x	x
Choice of option and rationale for choice		<p>Option A - The Submission Core Strategy also partially adopts Option A by identifying port related sites, wharves, transport as safe guarded sites along the River Thames.</p> <p>Option B- The Council adopted Option B in accordance with National policies.</p>		
Link to relevant document(s)		Core Strategy and Policies for Control of Development - Development Plan Document (DPD) "Preferred Options" consultation		

	<p>http://www.thurrock.gov.uk/planning/strategic/pdf/ldf_preferred_cs_200711.pdf SA of Preferred Options -Main Report: http://www.thurrock.gov.uk/planning/strategic/pdf/ldf_preferred_ear.pdf Technical appendices 1: http://www.thurrock.gov.uk/planning/strategic/pdf/ldf_preferred_ear_app1.pdf Technical appendices 2: http://www.thurrock.gov.uk/planning/strategic/pdf/ldf_preferred_ear_app2.pdf</p>
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Table 16: Preferred options appraisal: CSTP33 (Waste Strategy)

		Preferred policy option	Policy option A	Policy option B	Policy option C	Policy option D	Policy option E	Policy option F
Summary of option		The Council will seek to drive waste management up the waste hierarchy, by: 1) Promoting schemes and development that minimise waste. 2) Reduce waste arising and increase re-use/recycling and recovery of waste 3) Ensuring that the sufficient and timely delivery of suitable sites 4) To implement provisions of the emerging Thurrock Municipal Waste Strategy 5) Planning for provisions of range of waste facilities.	Wider partnership working for a shared network of facilities with surrounding subregions within the East of England	To manage all Thurrock's waste away from Urban areas dealt with by one new facility	By having a greater reliance upon land-filling Thurrock's Waste	A range of facilities away from main urban areas or proposed growth areas	Variable growth of C&I waste	To rely solely on the market to deliver sites for waste management by adopting criteria based approach, without the need to be site specific
Summary of SA findings	SA objective	Score	Score	Score	Score	Score	Score	Score
	1) Economic growth	+/?	+/?	?	?	?	?	?
	2) Economic diversity	?	?	?	?	?	?	?
	3) Investment	?	?	?	?	?	?	?
	4) Sustainable locations	+	+	?	X/?	?	?	?
	5) Land use	+/?	+/?	?	?	?	?	?
	6) Biodiversity	+	+	?	X	?	?/X	+
	7) Emissions & pollutants	+/?	+/?	?	X	?	X/?	?
	8) Cultural heritage	0	0	?	X/?	?	?	?
	9) Water consumption	0	0	0	0	0	0	?
	10) Natural resources	+/?	+/?	?	X/?	+/?	?	0
	11) Equality	0	0	0/+	0/?	0/+	0	0

12) Access to services	+/?	+/?	?	?	+/?	?	?
13) Housing	x	x	x	x	x	x	x
14) Crime	?	?	?	?	?	?	?
15) Health	?	?	+/?	?	+/?	?	8
16) Waste	+	+	?	X	+/?	X	?
Choice of option and rationale for choice	Option A- This is not an option but operational procedure of delivering the policy. Option B- Option rejected as this conflicts with the Green Belt policy. Option C- Option rejected as this is contrary to the Land Directory. Option D- Option rejected as it is contrary to Access and Green Belt policy. Option E- Option adopted following Council acceptance of more recent updated evidence base. Option F- Option rejected as it is contrary to National and Regional policy.						
Link to relevant document(s)	Core Strategy and Policies for Control of Development - Development Plan Document (DPD) "Preferred Options" consultation http://www.thurrock.gov.uk/planning/strategic/pdf/ldf_preferred_cs_200711.pdf SA of Preferred Options -Main Report: http://www.thurrock.gov.uk/planning/strategic/pdf/ldf_preferred_ear.pdf Technical appendices 1: http://www.thurrock.gov.uk/planning/strategic/pdf/ldf_preferred_ear_app1.pdf Technical appendices 2: http://www.thurrock.gov.uk/planning/strategic/pdf/ldf_preferred_ear_app2.pdf						

Broad Spatial Location Options

5.3.6 Chapter 7 also documents the appraisal of a series of options and rationale for rejection of alternatives options and the reasons the Proposed Submission options are still valid:

- Broad locations for housing development (Policy CSSP1 Section 3), including:
 - Options for Stanford-le-Hope/Corringham, Urban Extension and
 - Options for North East Grays Urban Extension;
- Broad locations for employment growth (Policy CSSP2); and
- Broad locations for Green Belt (Policy CSSP4) including Urban Extensions.

For benefit of readers, these Broad Spatial Options are considered in the context of the relevant overarching spatial policies in Chapter 7. It should be noted that these options and the rejected alternatives have been documented in order to satisfy the requirements of the SEA Directive, which requires that reasonable alternatives are identified, described and evaluated.

6 Appraisal findings

6.1 Introduction

6.1.1 The findings of the SA are set out in the following sections:

- Section 7: Spatial chapter – this chapter discusses the effects of the DPDs spatial policies and Thurrock’s broad regeneration areas.
- Sections 8 to 21 – Thematic chapters – the overall effects of the DPD have been considered against 14 thematic areas. These are:
 - Section 8: Economy and employment
 - Section 9: Sustainable land use
 - Section 10: Flood risk
 - Section 11: Biodiversity, flora and fauna
 - Section 12: Air quality and noise
 - Section 13: Cultural heritage, landscape and material assets
 - Section 14: Water
 - Section 15: Climate change
 - Section 16: Population and social equity
 - Section 17: Access to services
 - Section 18: Housing
 - Section 19: Crime and fear of crime
 - Section 20: Human health
 - Section 21: Soil and waste

6.1.2 Each of the thematic chapters (Sections 8 to 21) includes the following elements:

- Introduction to the theme
- Background description of the Thurrock context
- Updated sustainability baseline data and key sustainability issues
- Narrative summary of the appraisal findings including significant effects
- Recommendations for mitigation and/or enhancement
- Monitoring recommendations

6.1.3 The detailed appraisal matrices have been included as technical annexes to this report.

6.1.4 The identification of significant effects within each thematic chapter is a requirement of the SEA Directive:

The SEA Directive requires 'the likely significant effects on the environment, including on issues such as biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationship between the above factors; to be included in the environmental report.

Annex 1f, the SEA Directive

6.1.5 Similarly, the mitigation of significant effects is a key requirement of the SEA Directive and mitigation recommendations have also been included within each thematic chapter:

The SEA Directive requires 'the measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment of implementing the plan or programme' to be included in the environmental report.

Annex 1g, the SEA Directive

6.1.6 Our recommendations for monitoring are mostly drawn from the DPDs own monitoring framework. Monitoring significant effects is also a key requirement of the SEA Directive:

The SEA Directive states that 'member States shall monitor the significant environmental effects of the implementation of plans and programmes'.

Article 10, the SEA Directive

'Monitoring allows the actual significant effects of implementation of the SPD to be tested against those predicted in the SA'.

Section 4.3.21, Sustainability Appraisal of Regional Spatial Strategies and Local Development Documents, DCLG, 2005

7 Appraisal findings: Spatial Policies and Regeneration Areas

7.1 Introduction

7.1.1 This section sets out the detailed appraisal of Thurrock's spatial policies. This section also looks at the sustainability of six broad regeneration areas. As well as forming part of the SA of the DPD, the findings of this section have also been used in the Planning Policy Statement 25¹¹ Sequential Test (hereafter called Sequential Test) based on broad location areas within Thurrock. This study forms part of the evidence base for Thurrock Council's Core Strategy and Policies for Management of Development and will help to develop the preparation of the Submission version of this Development Planning Document (DPD).

7.1.2 The purpose of the Sequential Test in accordance with the advice in Annex D of Planning Policy Statement 25: Development and Flood Risk (PPS25) is to ensure that the broad areas for regeneration being proposed in the Core Strategy are appropriate in terms of flood risk whilst still meeting local needs for housing, employment, retail and community infrastructure.

7.1.3 The five Spatial Policies are:

- CSSP1- Sustainable Housing and Locations
- CSSP2 - Sustainable Employment Growth
- CSSP3 - Sustainable Infrastructure
- CSSP4 - Sustainable Green Belt
- CSSP5 - Sustainable Greengrid

7.1.4 The six broad regeneration areas appraised (shown in Figure 4) are:

- Grays Urban Area
- East Tilbury and Stanford-le-Hope/Corringham
- Purfleet
- Lakeside/West Thurrock
- London Gateway
- Tilbury

¹¹ Communities and Local Government (2006) Planning Policy Statement 25 Development and Flood Risk

7.2 Appraisal of the Spatial Policies

CSSP1- Sustainable Housing and Locations

- 7.2.1 This policy performs relatively well in relation to SA objectives covering economic growth and investment. The policy aims to concentrate most of the development in areas that have a range of services and are well served by public transport. These areas are also likely to benefit from most of the investment in relation to community and other infrastructure, including transport.
- 7.2.2 The quantum of development proposed for these locations will be accompanied by investment. This 'housing-led-regeneration' should generally improve the growth areas which in some cases contain pockets of deprivation. Therefore the policy also performs fairly well in terms of achieving more equitable benefits for Thurrock's communities (SA objective 11) and ensuring access to services for all but in particular for the most deprived. However, there is uncertainty as to whether the housing growth will benefit those most at need and unable to afford a home. The implementation of Thurrock's affordable housing targets (included in policy CSTP2) will be essential, in particular, given the current situation (which affects most of the country) of low developer margins and slow housing growth.
- 7.2.3 This policy also directs most of the new development (92%) to previously developed land (PDL) and as a result, it performs particularly well against the SA objective of 'making the best use of land in the borough'.
- 7.2.4 Such levels of development will inevitably have some negative impacts on sustainability, particularly in relation biodiversity and use of natural resources. These impacts will need to be managed. Some of the DPD's thematic and management of development policies will contribute to reducing these negative impacts. It will be particularly important to build biodiversity enhancements into new development, particularly as some of Thurrock's brownfield sites are currently rich in wildlife. It will be key to preserve and enhance this resource when developing these sites.
- 7.2.5 The key sustainability issue in relation to this policy is the potential impact on flood risk. The policy directs high levels of development to areas at risk of flooding. Thurrock Council will need to continue liaising with the Environment Agency and use the findings of the Strategic Flood Risk Assessment to manage and reduce the risk.
- 7.2.6 The use of resources such as energy will invariably grow as population and housing numbers increase, therefore it will be essential that new development is low or zero carbon (as required by national, regional and Thurrock's policies). The same principle applies to waste: an increase will be inevitable so a reduction in per capita waste production and an increase in reuse and recycling should be promoted as part of new development.
- 7.2.7 There are two additional uncertain scores in relation to this policy. The first is in relation to the landscape and built environment. This level of growth will need to be managed (in accordance with other relevant policies included in the DPD) and also phased adequately to reduce negative impacts.
- 7.2.8 The potential impact on water resources will also be determined by the phasing of the development. The draft Water Cycle Study for Thurrock found that there is little or no extra water available from existing sources to supply new development. Increased storage at the Abberton Reservoir (due to be completed in 2014) will be needed to ensure supply to new development. Therefore, the study recommends phasing of development up to 2014 and this will need to be carefully considered.

- 7.2.9 The three appraisal tables below consider the sustainability performance of the spatial approach to growth promoted by Policy CSSP1, as well as alternative approaches.
- 7.2.10 **Table 17** considers each of the broad locations for growth promoted within the Policy and presents the Council's justification for selecting each of these broad locations. The appraisal highlights that the approach of focusing growth at the borough's urban area performs well, from a sustainability perspective, as does the approach of delivering growth through an urban extension to North East Grays and at 'outlying settlements south of the A13'. The approach of delivering growth at 'outlying settlements south of the A13' and through an urban extension to Stanford-le-Hope/Corringham performs well in terms of most sustainability objectives, but could also lead to some conflicts with sustainability objectives. Delivering growth at small Green Belt sites / villages in the Green Belt performs less well from a sustainability perspective.
- 7.2.11 **Table 18** focuses specifically on the proposed approach for expansion at Stanford-le-Hope/Corringham, and the alternative approach for this location. Included at the bottom of this table is text, provided by the Council, which explains their reasons for selecting the preferred approach and rejecting the alternative approach. The appraisal highlights that the Proposed Submission Stage approach has a marginally more favourable outcome in terms of SA/SEA, particularly in relation to sustainable land use.
- 7.2.12 **Table 19** focuses on the proposed approach for expansion at North East Grays, as well as the alternative approach for this location. Again, included at the bottom of this table is text, provided by the Council, which explains their reasons for selecting the preferred approach and rejecting the alternative approach. The appraisal highlights that the Proposed Submission Stage approach has a more favourable SA/SEA outcome in relation to sustainable land use, biodiversity and cultural heritage objectives.

Table 17: Appraisal of spatial elements to Policy CSSP 1: Sustainable Housing and Locations

SA objective	Urban area (inc. Purfleet, West Thurrock/Lakeside, Grays, Tilbury and Chadwell St Mary)	Outlying settlements north of A13 (Ockendon and Aveley)	Outlying settlements south of A13 (East Tilbury and Corringham/Stanford-le-hope)	Stanford-le-hope/Corringham Urban Extension	North-east Grays urban extension	Small Green Belt sites / Villages in Green Belt
1) Economic growth	+	-	+	+	+	-
2) Economic diversity	+	?	+	+	?	?
3) Investment	+	-	+	+	+	-
4) Sustainable locations	++	+	+	-	+	-
5) Land use	++	+	+	-	+	-
6) Biodiversity	+	+	+	?	+	?
7) Emissions & pollutants	-	-	-	-	-	-
8) Cultural heritage	+	?	?	0	0	?
9) Water consumption	0	0	0	0	0	0
10) Natural resources	0	0	0	0	0	0
11) Equality	+	+	+	+	+	-
12) Access to services	++	+	+	+	+	-
13) Housing	+	+	+	+	+	+
14) Crime	0	0	0	0	0	0
15) Health	0	0	0	0	0	0
16) Waste	0	0	0	0	0	0
SA conclusion:	The main urban area is comfortably the best performing location for growth. Housing growth here will be the best means of encouraging investment in Thurrock, as well as 'organic' economic growth. Housing growth here will also support diversification of the economy, through supporting expansion at Lakeside. In terms of economic objectives, it is suggested that housing growth at outlying settlements south of the A13 (East Tilbury and Corringham/Stanford-le-Hope) will also be beneficial (assuming that this will lend support for growth at London Gateway); whilst housing growth at outlying settlements north of the A13 (Ockendon and Aveley) is less likely to be beneficial.					

	<p>In terms of addressing deprivation and inequality within Thurrock, a key consideration is the degree to which targeted housing growth can support the regeneration of town centres as well as the delivery/enhancement of local centres and community facilities more generally. It is suggested that, with the exception of 'villages in the Green Belt', all of the locations for housing growth are likely to result in benefits. Housing growth focused on the main urban area is likely to be particularly beneficial, given that this area is a focus for deprivation currently. It is expected that development at both Purfleet and Lakeside/West Thurrock will support regeneration and enhancements to community facilities. It is also noted that Grays is currently the focus for service and cultural facilities in the borough, but there is a need for enhancements. Having said this, it is also noted that there are concentrations of deprivation at outlying settlements, both north (i.e. Ockendon and Belhus wards) and south (i.e. at Tilbury St. Chads ward) of the A13. Housing growth at Ockendon/Aveley should support the achievement of identified regeneration needs, and it is also expected that growth at Stanford-le-Hope/Corringham will support enhancements to community facilities town centre improvements.</p> <p>In terms cultural heritage related objectives, it is expected that housing growth targeted at the main urban area is likely to be beneficial, given that growth at Tilbury will support development of cultural facilities associated with the riverside and its cultural heritage. Similarly, it is expected that growth at Purfleet, Grays and Tilbury will result in biodiversity benefits as a result of lending support to the creation of new connections to the river frontage and expansion of the Green Grid.</p> <p>The appraisal has highlighted that the urban extensions to Stanford-le-Hope/Corringham and Grays will, in many respects, support the achievement of sustainability objectives in a similar fashion to growth targeted at the towns themselves. However, a number of negative effects may be associated with the urban extension of Stanford-le-Hope/Corringham, given that this is a greenfield location.</p> <p>The appraisal highlights that villages in the Green Belt perform relatively poorly when considered as potential locations for growth. However, it is important to note that the level of growth at these locations will be small, and so any negative effects will be of a low magnitude.</p> <p>The appraisal has suggested that all locations for growth are likely to result in increased traffic congestion in those parts of Thurrock that currently have air quality problems. It is not apparent that growth at any of the locations would lead to avoidance of this effect.</p>
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Origins and rationale for options

Urban area (Purfleet to Tilbury including Lakeside)

- **Conformity with National Policy**
The Broad location complies with national policy guidance for the Green Belt policy, Thames Gateway and planning policy guidance for Housing, Employment, Sustainable Development, Transport and use of previously developed land etc.
- **Conformity with the RSS**
The Broad location is in Conformity with the Policies in the Regional Spatial strategy, The East Of England Plan (RSS EEP) and Single Issue Review for Policy ETG2 ((including Lakeside). The Broad Location is defined as Key Centre for Development and Change (KCDC) in the RSS EEP and a regional centre. The Location complies with the Housing and Employment and sub-regional spatial locations referred to in the RSS EEP.

- **Conformity with Local Plans and Strategies**
The Broad Location aligns with the Community Strategy, Economic Recovery and Growth Plan and other Council Corporate Strategies for Education, Green Grid and Housing. The Broad location aligns with TTGDC Regeneration and Spatial Strategies. The Broad Location links to the strategies and infrastructure provision of other service providers.
- **Outcome of the SA/SEA**
The Broad Location scores very highly in the various criteria and spatial options test in various stages of the SA/SEA.
- **The Evidence Base**
The vast majority of dwellings identified on the sites are on previously developed land (98%) in the regeneration areas as identified by various elements of evidence base. The broad location acts as a major contribution to housing supply and employment. Strong alignment with evidence from SHLAA, Employment Land Review, Infrastructure and Implementation, Landscape, Green Grid, Open Space, Leisure and Sports studies.
- **Alternative Options**
A number of alternative Green Belt urban extension Broad Locations were considered unsuitable at Issues and Options and Preferred Options stage of the Core Strategy and Site Allocations Development Plan Documents. Alternative options were rejected for various reasons under the matters above including impact on the Green Belt, non-conformity with the RSS EEP, detrimental impact on Green Infrastructure assets & open space, less favourable SA/SEA scores, impact on the highway and poor access to services and infrastructure. The rejected Broad Locations Zones were - Zone 1a Purfleet Green Belt (North and adjoining Urban Area); Zone 4a North Stifford/Lakeside Green Belt (North of West Thurrock /Lakeside Urban area); Zone 6a Tilbury Green Belt (North and East of Tilbury Urban Area); Zone 7a Chadwell St. Mary Green Belt (Land north and south of Chadwell Urban Area).

Outside settlements north of A13 (Ockendon and Aveley)

- **Conformity with National Policy**
The Broad location complies with national policy guidance for the Green Belt policy, Thames Gateway and planning policy guidance for Housing, Employment, Sustainable Development, Transport and use of previously developed land etc.
- **Conformity with the RSS**
The Broad location is in Conformity with the Policies in the Regional Spatial strategy, The East Of England Plan (RSS EEP). The Location complies with the Housing and Employment and sub-regional spatial locations referred to in the RSS EEP.
- **Conformity with Local Plans and Strategies**
The Broad Location aligns with the Community Strategy, Economic Recovery and Growth Plan and other Council Corporate Strategies for Education, Green Grid, Housing and Sports. The Broad location aligns with TTGDC Regeneration and Spatial Strategies. The Broad Location links to the strategies and infrastructure provision of other service providers.
- **Outcome of the SA/SEA**
The Broad Location scores very highly in the various criteria and spatial options test in various stages of the SA/SEA.
- **The Evidence Base**
The vast majority of housing sites are on previously developed land (80%) as identified by various elements of evidence base. Green Belt sites already have planning permission. The broad location contributes to housing supply. Strong alignment with evidence from SHLAA, Employment Land Review, Infrastructure and Implementation, Landscape, Green Grid, Open Space, Leisure and Sports studies.
- **Alternative Options**
A number of alternative Green Belt Urban extensions and stand alone Green Belt developments were considered unsuitable at Issues and Options and Preferred Options stage of the Core Strategy and Site Allocations Development Plan Documents. Alternative options were rejected for various reasons

under the matters above including impact on the Green Belt, non-conformity with the RSS EEP, detrimental impact on Conservations areas and open space, less favourable SA/SEA scores, impact on the highway and poor access to services and infrastructure. The rejected Broad Locations Zones were: Zone 2a Aveley Green Belt (Land South and West of Aveley Urban Area); Zone 3a and 3b South Ockendon Green Belt (Land East, South and North of South Ockendon Urban Area).

Outside settlements south of A13 (East Tilbury, Stanford Le /Corringham)

- **Conformity with National Policy**
The Broad location complies with national policy guidance for the Green Belt policy Thames Gateway and policy guidance for Housing, Employment, Sustainable Development, Transport and use of previously developed land etc.
- **Conformity with the RSS**
The Broad location is in Conformity with the Policies in the Regional Spatial strategy, The East Of England Plan (RSS EEP). The Location complies with the Housing and Employment and sub-regional spatial locations referred to in the RSS EEP.
- **Conformity with Local Plans and Strategies**
The Broad Location aligns with the Community Strategy, Economic Recovery and Growth Plan and other Council Corporate Strategies for Education, Green Grid, Housing and Sports. The Broad location aligns with TTGDC Regeneration and Spatial Strategies. The Broad Location links to the strategies and infrastructure provision of other service providers.
- **Outcome of the SA/SEA**
With development focused in the urban area the Broad Location scores highly in the various criteria and spatial options test in various stages of the SA/SEA.
- **The Evidence Base**
The vast majority of housing sites are on previously developed land (73%) as identified by various elements of evidence base. The sites in the Green Belt have planning permission. The broad location contributes to housing supply. Strong alignment with evidence from SHLAA, Employment Land Review, Infrastructure and Implementation, Landscape, Green Grid, Open Space studies.

Stanford-Le Hope Urban Extension

- **Conformity with National Policy**
The Broad location complies with national policy guidance for the Green Belt policy, Thames Gateway, and planning policy guidance for Housing, Employment, Sustainable Development, Transport and use of previously developed land etc..
- **Conformity with the RSS**
Although Green Belt release is not generally supported in the RSS EEP for Thurrock the location only comprises small scale proposed urban extensions for residential development at Stanford –Le-Hope.
- **Conformity with Local Plans and Strategies**
The Broad Location aligns with the Community Strategy, Economic Recovery and Growth Plan and other Council Corporate Strategies for Education, Green Grid, and Housing. The Broad location aligns with TTGDC Regeneration and Spatial Strategies. The Broad Location links to the strategies and infrastructure provision of other service providers.
- **Outcome of the SA/SEA**
Larger urban extension in this location scored less well in the SA/SEA assessment of the Core Strategy and Site Allocations Development Plan Documents at Issues & Options and Preferred Options. In particular access to services, transport impact. However the small-scale of the proposed urban extension and location is considered to have a less detrimental impact.

- **The Evidence Base**
The broad location contributes to housing supply. Strong alignment with evidence from SHLAA, Employment Land Review, Infrastructure and Implementation, Landscape, Green Grid, Open Space studies. Issues of flood risk highlighted at two locations have been considered addressed with development proposals required to have appropriate mitigation and avoidance of development on flood Zone 3b.
- **Alternative Options**
A number of alternative Green Belt Urban extensions and stand alone Green Belt developments were considered unsuitable at Issues and Options and Preferred Options stage of the Core Strategy and Site Allocations Development Plan Documents. Alternative options were rejected for various reasons under the matters above including impact on the Green Belt, non-conformity with the RSS EEP, detrimental impact on Conservations areas and open space, less favourable SA/SEA scores, Flood Risk, impact on the highway and poor access to services and infrastructure. The rejected Broad Locations Zones were: Zone 8a East Tilbury Green Belt (Green Belt adjoining and surrounding the East Tilbury Urban Area); Zone 10a Stanford-Le-Hope Green Belt (The majority of Green Belt land south and east of Stanford le-Hope/ Corringham).

North East Grays

- **Conformity with National Policy**
The Broad location complies with national policy guidance for the Green Belt policy Thames Gateway and policy guidance for Housing, Employment, Sustainable Development, Transport and use of previously developed land etc..
- **Conformity with the RSS**
Although Green Belt release is not generally supported in the RSS EEP for Thurrock the location only comprises small scale proposed urban extensions for residential development at edge of the Grays Urban Area and largely on previously developed land. The Urban Area is defined as Key Centre for Development and Change (KCDC) in the RSS EEP.
- **Conformity with Local Plans and Strategies**
The Broad Location aligns with the Community Strategy, Economic Recovery and Growth Plan and other Council Corporate Strategies for Education Green Grid, Housing and Sports. The Broad location aligns with TTGDC Regeneration and Spatial Strategies. The Broad Location links to the strategies and infrastructure provision of other service providers.
- **Outcome of the SA/SEA**
The Broad Location scores very highly in the various criteria and spatial options test in various stages of the SA/SEA.
- **The Evidence Base**
The vast majority of housing sites are on previously developed land (81%) in the Submission version of the plan as identified by various elements of evidence base. The broad location contributes to housing supply. Strong alignment with evidence from SHLAA, Employment Land Review, Infrastructure and Implementation, Landscape, Green Grid, Open Space studies.
- **Alternative Options**
A larger alternative option was considered at Preferred Options stage for this broad location that included more Green Belt sites for housing. The larger broad location was rejected due to impact upon the Green Belt and highways network and impact upon Scheduled Ancient Monument and open space and biodiversity. The Proposed Submission version has a more favourable SA/SEA outcome in relation to sustainable land use, biodiversity and cultural heritage objectives. Broad Location rejected includes Green Belt Contingency Sites HGB 1-4 See table 19.

Small Villages

Note – The Small village dwelling capacity comprises a range of small sites identified throughout the villages in Thurrock and also includes some small free

standing sites. The capacity is therefore not a specific location. Many of the identified dwelling sites have planning permission. The capacity is included for completeness in the policy and this assessment.

- **Conformity with National Policy**

The Broad location complies with national policy guidance for the, Green Belt policy, Thames Gateway and planning policy for Housing, Employment, Sustainable Development and use of previously developed land etc.

- **Conformity with the RSS**

Some of the locations are Conformity with the Policies in the Regional Spatial strategy, The East Of England Plan (RSS EEP). Generally in other locations the sites are on previously developed land. Although Green Belt release is not generally supported in the RSS EEP for Thurrock the location of the majority of small Green Belt are sites that already have planning permission.

- **Conformity with Local Plans and Strategies**

The sites generally align with the Community Strategy and other Council Corporate Strategies for Education, Green Grid, and Housing. The Broad Location sites because of the size and location do not have a significant local or cumulative impact upon the strategies and infrastructure provision of other service providers.

- **Outcome of the SA/SEA**

Village locations generally had a less favourably outcome in terms of SA/SEA in the Issues & Options and Preferred Options stages. Poor access to services and increased travelling were more negative outcomes. However the sites provide some housing supply in these locations and comprise previously developed land or Green Belt sites with planning permission.

- **The Evidence Base**

The vast majority of housing sites are on previously developed land (89%) as identified by various elements of evidence base. The broad location contributes to housing supply. Strong alignment with evidence from SHLAA, Employment Land Review, Infrastructure and Implementation, Landscape, Green Grid, Open Space studies.

- **Alternative Options**

A number of alternative Green Belt Urban extensions and stand alone Green Belt developments were considered unsuitable at Issues and Options and Preferred Options stage of the Core Strategy and Site Allocations Development Plan Documents. Alternative options were rejected for various reasons under the matters above including impact on the Green Belt, non-conformity with the RSS EEP, detrimental impact on Conservations areas and open space, less favourable SA/SEA scores, impact on the highway and poor access to services and infrastructure. The rejected Broad Locations Zones – 9a and b included a range of Green Belt village extensions and free standing sites identified in the Preferred Options Site Allocations DPD. The rejected sites included proposed extensions to villages at Horndon on the Hill and Orsett (Beauchamp Gate). Free standing sites included Green Belt Sites at Bulphan, Langdon Hills Golf Course and small sites across the borough.

Table 18: Appraisal of the Corringham/Stanford-le-Hope element of Policy CSSP1

SA objective	Preferred Options stage (NE Stanford/NE Corringham, 5 sites)	‘Proposed Submission’ Stage (3 sites)
1) Economic growth	+	+
2) Economic diversity	0	0
3) Investment	+	+
4) Sustainable locations	-	-
5) Land use	-	?
6) Biodiversity	?	?
7) Emissions & pollutants	0	0
8) Cultural heritage	0	0
9) Water consumption	0	0
10) Natural resources	0	0
11) Equality	+	+
12) Access to services	+	+
13) Housing	+	+
14) Crime	0	0
15) Health	0	0
16) Waste	0	0
SA conclusion:	<p>The appraisal table suggests that effects associated with the two approaches are broadly similar in most respects, but that the Proposed Submission Stage approach performs better in terms of the sustainable ‘land use’ objective because it will result in less loss of open land within Green Belt with the Reasonable Alternative Green Belt sites at North East Corringham excluded.</p> <p>Other differences between the two approaches are less significant, but noteworthy none-the-less.</p> <p>In terms of ‘economic growth’ and ‘investment’, it is important to consider that Corringham/Stanford-le-Hope is in close proximity to the London Gateway development, and so housing growth at this location will be supportive of commercial growth ambitions. In this sense, Preferred Options Stage approach might be considered to perform marginally better than the Proposed Submission Stage approach, given that it would support a greater scale of housing growth.</p>	

	<p>In terms of the degree to which each approach represents development at ‘sustainable locations’, it is important to note that the sites under consideration to the north of Stanford-le-Hope are more closely related to a local centre (and a train station) than the sites to the north of Corringham, and so the Proposed Submission Stage approach (which is focused at Stanford-le-Hope) will be more supportive of efforts to ensure good access to services and facilities and encourage walking and cycling. However, it is noted that the local centre at Corringham has a better offer than the local centre at Stanford-le-Hope. Also, it is noted that there is perhaps greater potential for residents of the northern edge of Corringham to access the London Gateway Development by bicycle.</p> <p>Focusing again on the relationship between housing growth and the use of local centres, it is noted that both Corringham and Stanford-le-Hope local centres are in need of investment and improvement. Hence, it might be the case that the Proposed Submission Stage approach performs less well, as without housing growth to the north of Corringham there may be less stimulus to improve the town centre.</p> <p>Finally, it is noted that two designated Conservation Areas are to be found on the southern edge of Corringham. This might suggest that the Proposed Submission Stage approach - which will direct less growth to Corringham - will result in less potential for negative effects. However, it is not thought that impacts to cultural heritage are a significant consideration, given that the Conservation Areas are located away from the locations for growth (proposed by the Preferred Options Stage approach).</p>
Rationale for choice of alternative/option:	<p>The Proposed Submission version of the Broad Location excludes the Green Belt release site at North East Corringham. The Proposed Submission version was chosen as it involved less release of Green Belt and loss of open space. The Proposed Submission version is also in more conformity with the RSS EEP in terms of spatial strategy. The impact of development on localised roads is reduced. The Proposed Submission version has a marginally more favourable outcome in terms of SA/SEA, particularly in relation to sustainable land use.</p>

Table 19: Appraisal of the North east Grays element of Policy CSSP1

SA objective	Preferred Options Stage – Larger broad location	Proposed Submission Stage – Smaller broad location
1) Economic growth	+	+
2) Economic diversity	0	0
3) Investment	+	+
4) Sustainable locations	-	-
5) Land use	-	+
6) Biodiversity	-	?
7) Emissions & pollutants	?	0
8) Cultural heritage	-	0
9) Water consumption	0	0
10) Natural resources	0	0
11) Equality	+	+
12) Access to services	?	?
13) Housing	+	+
14) Crime	0	0
15) Health	0	0
16) Waste	0	0
SA conclusion:	<p>The first thing to note is the suggestion that the Preferred Options Stage approach could result in significant negative effects to biodiversity and cultural heritage. This relates to the fact that development of the eastern-most of the sites would have the potential to impact to a Local Wildlife Site and a Scheduled Ancient Monument. There is less likelihood that the scale of growth proposed through the Proposed Submission Stage approach would lead to significant biodiversity effects, and it is not expected that there would be impacts to cultural heritage. In terms of cultural heritage, it is also important to consider that the Preferred Options Stage approach would lead to significant impacts to the landscape setting of Grays. It might be suggested that this would also have a bearing on the image of Grays to those that might look to invest in the area; however, this effect is uncertain.</p> <p>The appraisal table, above, also highlights that the Proposed Submission Stage approach represents a relatively good use of available land resource, given that development will be focused on previously developed land. The Preferred Options Stage approach would involve considerable loss of greenfield land with inclusion of Green Belt contingency sites HGB 1 to 4.</p>	

	<p>In terms of 'economic growth' and 'investment', housing growth at Grays can be considered to be a broadly positive step, given that Grays is itself a strategic employment hub, and is in close proximity to other (even more significant) employment hubs at Tilbury and Lakeside/West Thurrock. In this sense, it might be suggested that whilst both approaches will have positive effects, the Proposed Submission Stage approach, which would involve less growth at Grays, does not perform as well.</p> <p>It may also be the case that there is good potential to access employment from this area by public transport, in which it might also be suggested that growth should be encouraged (as per the preferred options approach). However, these locations are not well related to local centres, and so it is not thought that encouraging development of a greater scale (as per the Preferred Options Stage approach) would be supportive of efforts to encourage walking and cycling). Of the sites considered at the Preferred Options Stage, it would appear that the eastern-most site is best located in terms of access to a local centre.</p> <p>An uncertain score is also assigned to the Preferred Options Stage approach for the 'emissions and pollutants' objective, given that a large number of car journeys would be generated, and there may be the potential for these to be concentrated within the local road network.</p>
<p>Rationale for choice of alternative/option:</p>	<p>The Proposed Submission version has less impact on the purpose of the Green Belt with less Green Belt released for residential development. The majority of land proposed for residential development is previously developed land in the Proposed Submission version and has two Green Belt sites less as part of the overall broad location.</p> <p>The Proposed Submission version more closely aligns with other local plans and strategies including the Education, Leisure and sports strategies which are key factor in the selection of sites remaining to be developed for residential in the Green Belt as part of the relocation of school and college facilities.</p> <p>The Preferred Option stage version included sites for residential development that are likely to adversely impact upon Green Infrastructure assets.</p> <p>The Proposed Submission version would have less adverse impact on the highway network due to the smaller scale of the proposal and it reduces the problem of access arrangements to the local road network.</p> <p>The Proposed Submission version has a more favourable SA/SEA outcome in relation to sustainable land use, biodiversity and cultural heritage objectives.</p>

CSSP2 Sustainable Employment Growth

- 7.2.13 Similarly to CSSP1, the policy performs well in terms of the SA objectives related to economic growth, economic diversity and skills, encouraging investment and sustainable use of land. This policy is highly aspirational in terms of numbers of jobs and the diversification of Thurrock's economy. If this is achieved, the benefits for Thurrock and its residents will be great. However, job creation should be accompanied by an investment in improving the skills of the local population so they can really benefit.
- 7.2.14 The comments made in relation to flood risk, biodiversity, water, energy, landscape and heritage made under policy CSSP1 also apply here.
- 7.2.15 In addition, it will be particularly important to encourage new and existing businesses to minimise their use of resources and production of waste. Another key point, in relation to SA Objective 7 (protecting and enhancing the environment) will be that new and existing businesses should not only minimise their impact but also, where possible, seek to enhance the environment. This will be important to achieve the Council's objective of making Thurrock an attractive and healthy place to live.
- 7.2.16 **Table 20** adds further detail by considering the sustainability performance of the spatial approach to growth promoted by Policy CSSP2. The appraisal suggests that most locations for employment growth are likely to be broadly beneficial in terms of sustainability objectives, but that some question marks exist in relation to Tilbury, London Gateway and 'other sites in the borough'.

Table 20: Appraisal of spatial elements to Policy CSSP2: Sustainable Employment Growth

SA objective	Purfleet	Grays	Lakeside Basin / West Thurrock	Tilbury	London Gateway	Other sites in Borough
	Storage and warehousing; freight transport Business services; recreation and leisure; creative industries Royal opera House Production Facility, High House. 2,800 jobs	Retail Business services; recreation and leisure; public sector services - Thurrock Learning Campus; - Grays Community Business Centre; - Sustainable Business Centres and Incubators. 1,650 jobs	Retail; logistics and transport; construction Business services; retail; recreation and leisure - Sustainable Business Centres and Incubators 7,000 – 9,000 jobs	Port; logistics and transport; and construction Business services; environmental technologies; recycling; and energy - Tilbury Eco-Quarter; - Expansion of Tilbury Riverside Business Centre. 1,600 – 3,800 jobs	Port; logistics and transport Environmental technologies; recycling; and energy - Training, Innovation and Research Facility; - Business and Distribution Park. 11,000 – 13,000 jobs	Logistics; freight transport; small business units Business services; small business units; cultural; leisure. 1,700 jobs
1) Economic growth	+	+	++	+	++	?
2) Economic diversity	++	+	++	++	+	+
3) Investment	+	+	++	+	++	?
4) Sustainable locations	+	+	+	-	?	?
5) Land use	+	+	+	-	?	?
6) Biodiversity	+	+	+	?	?	?
7) Emissions & pollutants	-	-	-	-	-	-
8) Cultural heritage	0	0	0	0	0	0
9) Water consumption	0	0	0	0	0	0
10) Natural resources	0	0	0	0	0	0
11) Equality	+	+	+	+	+	+
12) Access to services	?	+	+	?	?	+

13) Housing	0	0	0	0	0	0
14) Crime	0	0	0	0	0	0
15) Health	0	0	0	0	0	0
16) Waste	0	0	0	0	0	0
SA conclusion:	<p>Employment growth targeted to these locations will, of course, stimulate investment and economic growth. It is suggested that the greatest opportunities might be associated with growth at Lakeside/West Thurrock and at the London Gateway.</p> <p>In terms of supporting economic <i>diversity</i>, the picture is similar but perhaps not identical. Supporting employment growth at 'other locations' should be beneficial in terms of supporting economic diversity, whereas these might not be considered to be ideal locations for employment development given the objective of maximising economic growth. In terms of supporting economic diversity, it is also noted that 1) growth at Purfleet will be targeted towards support for the creative industries; 2) growth at Tilbury will include a focus on environmental industries; and 3) employment development at London Gateway will secure the long-term future of the port industry in Thurrock.</p> <p>In terms of directing growth towards 'sustainable locations' and ensuring 'sustainable land use' it is expected that most sites will lead to benefits, given that there will be full use made of the previously developed land resource. Growth at Tilbury has been shown to perform less well in terms of these objectives, as it will necessitate a degree of greenfield land take.</p> <p>In terms of addressing derivational needs, and reducing inequality within Thurrock, it is suggested that all major sites will lead to benefits, given that employment opportunities will be created that are accessible to deprived communities. The approach of allocating a degree of employment growth to 'other sites' is also beneficial, given that pockets of deprivation exist in the more outlying settlements.</p> <p>Another way in which growth can address deprivation is through enabling enhancement to services and facilities. It is suggested that a focus on retail growth in Grays should have the indirect effect of strengthening the service offer within the Town Centre; and also that a focus on growth in Lakeside/West Thurrock should help to ensure it develops into a 'regional centre' with a broad service offer.</p> <p>The appraisal has suggested that all locations for growth are likely to result in increased traffic congestion in those parts of Thurrock that currently have air quality problems. It is not apparent that growth at any of the locations would lead to avoidance of this effect.</p>					

CSSP3 Sustainable Infrastructure

- 7.2.17 Thurrock Council recognises in the supporting text to this policy that providing adequate social and physical infrastructure to meet the needs of existing and future development is of the utmost importance. The Council also recognises that the planned and co-ordinated phasing of development and infrastructure will be key to delivering regeneration for Thurrock.
- 7.2.18 Therefore and although in sustainability terms this is a positive policy, it will be this phasing and co-ordinated delivery of infrastructure that will determine the final impacts. This is reflected in the uncertain scores that this policy is given in terms of SA objectives 1 (sustainable levels of growth) and 3 (investment and ensuring that current and future residents want to live and work in the Borough).
- 7.2.19 The policy scores well in relation to contributing to improving local skills, delivering sustainable patterns of land use and making best use of land in the borough. The policy also scores well in terms of equity, improving access to health facilities and ensuring a fairer access to services for the most deprived areas in Thurrock.
- 7.2.20 The same issues and suggested mitigation as for the two preceding policies (CSSP1 and 2) applies in relation to flood risk, biodiversity and minimising pollution.

CSSP4 Sustainable Green Belt

- 7.2.21 This policy is relatively benign in sustainability terms. In addition to restricting development in the green belt, in accordance to national and regional policy, CSSP4 also promotes positive uses such as educational provision, leisure and sports. The policy also aims to increase public access and improve biodiversity in the green belt.
- 7.2.22 With regards to biodiversity, the policy supports the release of green belt land to the North of Tilbury for port-related activities which could impact on the Tilbury Estuary and Marshes SPA. Therefore it will be particularly important that the management arrangements and mitigation measures required by the policy are put in place and the findings of the Habitats Regulations Assessment are taken into account.
- 7.2.23 **Table 21** adds further detail by considering the sustainability performance of the spatial approach promoted by Policy CSSP4. The key point raised by the appraisal is that Green Belt loss at Tilbury Marsh has the potential to conflict with sustainability objectives, due to the loss of greenfield land whilst the areas of greenfield in the Green Belt under consideration at Stanford-le-Hope is less. On the other hand the Urban Extension at North East Grays is currently a mixture of greenfield and previously developed land.

Table 21: Appraisal of spatial elements to Policy CSSP4: Sustainable Green Belt

SA objective	Tilbury Marshes	North-east Grays	NE Stanford-le-Hope
1) Economic growth	+	+	+
2) Economic diversity	0	0	0
3) Investment	+	+	+
4) Sustainable locations	-	+	+
5) Land use	-	+	+
6) Biodiversity	?	0	0
7) Emissions & pollutants	0	0	0
8) Cultural heritage	0	0	0
9) Water consumption	0	0	0
10) Natural resources	0	0	0
11) Equality	0	0	0
12) Access to services	0	++	+
13) Housing	0	+	+
14) Crime	0	0	0
15) Health	0	0	0
16) Waste	0	0	0
SA conclusion:	<p>The following key points are highlighted through the appraisal:</p> <ol style="list-style-type: none"> 1) Development in the Green Belt at Tilbury Marsh will involve significant greenfield land take, where as development at the other two locations will not involve as much and North East Grays a significant proportion of Previously Developed land in the Green Belt 2) Support for housing at Grays may be considered beneficial in terms of supporting access to services, given that Grays is a key service centre. 3) Similarly, growth at Stanford-le-Hope will be supportive of efforts to attract investment locally and improve the town centre. 		

CSSP5 Sustainable Greengrid

- 7.2.24 This is another policy that performs well in sustainability terms. Amongst its key positive aspects, the policy aims to make green infrastructure an essential aspect of all development, improve access and increase use of open space. The implementation of this policy could also contribute to manage the risk of flooding in Thurrock through reducing run-off and providing permeable surfaces. The policy also emphasises other potential benefits or services that the Greengrid can provide including food, biomass and wood production
- 7.2.25 The policy also promotes a strategic approach to providing and enhancing green spaces and infrastructure, which makes it particularly positive for biodiversity and habitats. As a result, it should reduce habitat fragmentation which will be key to ensuring adaptation of biodiversity and habitats to climate change.

7.3 Appraisal of Broad Regeneration Areas

Grays Urban Area

- 7.3.1 Grays is identified as one of the key regeneration areas in Thurrock. Grays town is identified as a key location for new cultural, education and public services. A new learning campus is proposed in Grays South and a new Community Hospital in the north of the town centre. There will be further commercial redevelopment in the town centre and the addition of further residential development in the fringes of the town centre area.
- 7.3.2 This broad location area generally performs well in sustainability terms with the exception of flood risk. Development in this area will be located on brownfield land and therefore it is likely to result in significant positive impacts in relation to delivering sustainable patterns of development and making best use of land in Thurrock. Development will also encourage regeneration of the area and thus benefit existing and future communities. Important community facilities will be provided as part of the development of the area including educational facilities and a new hospital. This provision will have a positive impact on access to services in an area that has pockets of significant deprivation. Importantly, the new hospital development should reduce health inequalities in the borough. If biodiversity enhancements are provided as part of the new development, this will also have a positive impact. Development in this area should be phased according to improvements to existing infrastructure, particularly in relation to water resources.

East Tilbury/Stanford-le-Hope/Corringham

- 7.3.3 Thurrock Council have proposed to regenerate the area with the provision of a limited number of houses and jobs with associated supporting community infrastructure and services.
- 7.3.4 Development of this broad location area should result in positive sustainability impacts with the exception of flood risk. Development in this area will be on brownfield land and thus it is likely to provide significant positive benefits in terms of sustainable patterns of development and land use. Regeneration of the town centre and provision of new housing and employment will provide economic and social benefits for the borough as a whole and the current and future population of this area. In order to maximize the positive sustainability impacts, it will be important to ensure that development is accompanied of improvements to the existing infrastructure. Enhancements to the borough's biodiversity and open spaces should also be provided as part of new development.

Purfleet

- 7.3.5 Purfleet is identified as one of the key regeneration areas in Thurrock. Purfleet is identified as a main residential led regeneration area with focus of new community and public services around the railway station.
- 7.3.6 Development of this key regeneration area will result in positive sustainability impacts for Thurrock with the exception of flood risk. Development in this area would occur on brownfield land and therefore will provide significant benefits in terms of sustainable patterns of development and land use. Development in this area will be accompanied by large scale regeneration and provision of important community facilities including a community hub, health centre and educational facilities. There will also be an emphasis on culture and the arts, including the Royal Opera House project. Therefore development should result in positive impacts in relation to providing social benefits, including improving access to services, ensuring a more equitable sharing of benefits and reducing health inequalities. Development is also likely to result in positive economic impacts and contribute to the diversification of Thurrock's economy. Improvements to the transport network will also be provided and are likely to result in a reduction in the use of cars which will contribute to various aspects of sustainability including air quality. Open space and biodiversity enhancements will provide additional sustainability benefits.

Lakeside/West Thurrock

- 7.3.7 Lakeside/West Thurrock is identified as one of the key regeneration areas in Thurrock. The proposals for this area include major new commercial, retail and leisure proposals focused in the Lakeside area. Commercial and industrial development is to be focused along the riverfront with new residential and community uses in South Stifford, West Thurrock and in longer term in Lakeside basin as a regional/Town Centre.
- 7.3.8 Development in this broad location area will result in generally positive sustainability impacts for Thurrock with the exception of flood risk. The development will result in significant positive economic and employment impacts that are likely to provide borough wide benefits. Residential and employment development will also be accompanied by a range of new community facilities including education and health facilities. Therefore the development is likely to result in sustainability benefits for the local community and future residents by ensuring better access to services and reduce inequalities, including health inequalities. The development will be accompanied of significant transport improvements which are likely to result in a reduction in car use which will have sustainability benefits including on air quality. The provision of new open space and contributions to the Greengrid will provide additional sustainability benefits.

London Gateway

- 7.3.9 Major employment based regeneration is proposed, with around 11,000 new jobs, including the London Gateway Port and related uses. There will be a major logistics, import-export based employment development and development of associated activities including a strategic lorry park.
- 7.3.10 The large scale economic regeneration proposed for this broad location area will result in positive impacts in terms of increasing economic growth and diversity, encouraging new skills and encouraging investment. These positive impacts should benefit the borough as a whole. Employment in this area should also benefit from the wider Thames Gateway location and development will occur in previously developed land. It will also be beneficial in terms of

achieving sustainable patterns of development and land use. The key sustainability issue associated with this site relates to the risk of flooding.

Tilbury

- 7.3.11 Tilbury is one of the most deprived areas in the East of England and has been identified as a key regeneration area in Thurrock. The key proposals are a new commercial and port related development including some green belt release North of the Port and along the riverfront. Thurrock Council and the Thurrock Thames Gateway Development Corporation (TTGDC) are also proposing a major project for redevelopment of Tilbury town centre.
- 7.3.12 Development in this broad location area will result in a range of positive sustainability impacts. The key sustainability issue in relation to the area is flood risk. Development will be mostly employment focussed with some housing and improvements in access to the river and communities and health facilities. This will result in positive sustainability impacts in relation to employment and economic growth and encouraging investment. It should also contribute to social sustainability including improving access to services and community facilities and improving access to the river.

7.4 Summary of the Broad Location Options taken forward

- 7.4.1 Figure 4 below shows the potential Broad Location Areas considered at the Issues and Options and Preferred Options stages and the Broad Locations ultimately included in the Proposed Submission Core Strategy. The SA includes an appraisal of the six Broad Locations included in the Proposed Submission Core Strategy (i.e. the reasonable alternatives) – see Table 17. It should be noted that on submission of the Proposed Submission Core Strategy, the Council did not see any reason to revisit any of the rejected Broad Locations.
- 7.4.2 In addition, further spatial alternatives were considered for the size and configuration of the urban extensions at Stanford-le-Hope/Corringham and North East Grays, see Tables 18 and 19, respectively. In relation to North East Grays, the Proposed Submission Core Strategy included less development in the Green Belt and a greater focus on development on previously developed land and promoting the Council's education strategy. In relation to Stanford-le-Hope, the preferred option promoted in the Proposed Submission Core Strategy involved less Green Belt release than the other alternative considered. The SA also includes an appraisal of the key employment locations including the proposed Green Belt release north of Tilbury, see Table 20.

Figure 4: Broad Locations included in the Core Strategy (R = rejected alternative)

Issues and Options / Preferred Options	Proposed Submission Core Strategy
<p>Potential Broad Location Areas</p> <ul style="list-style-type: none"> • Purfleet Urban Area • Purfleet Green Belt (R) • Aveley Urban Area • Aveley Green Belt (R) • South Ockendon Urban Area • South Ockendon Green Belt (3a) (R) • South Ockendon Green Belt (3b) (R) • Lakeside/West Thurrock Urban Area • North Stifford/Lakeside Green Belt (R) • Grays Urban Area • Grays Green Belt • Tilbury Urban Area • Tilbury Green Belt (partially rejected) • Chadwell St Mary Urban Area • Chadwell St Mary Green Belt (R) • East Tilbury Urban Area • East Tilbury Green Belt (R) • Villages Urban Areas • Villages Green Belt (9a) (R) • Villages Green Belt (9b) (R) • Stanford-le-Hope Urban Area • Stanford-le-Hope Green Belt (partially rejected) • Shellhaven and environs 	<p><u>Housing</u> Broad Location 2009 - 2026</p> <ul style="list-style-type: none"> • Thurrock Urban Area <ul style="list-style-type: none"> ○ Purfleet ○ West Thurrock/Lakeside ○ Grays ○ Tilbury including town centre ○ Chadwell St Mary • Outlying settlements north of the A13 <ul style="list-style-type: none"> ○ Ockendon ○ Aveley • Outlying settlements south of the A13 <ul style="list-style-type: none"> ○ East Tilbury ○ Corringham/Stanford-le-Hope • Stanford-le-Hope/Corringham Urban Extension • North East Grays Urban Extension • Small Green Belt sites/villages in Green Belt <p><u>Employment</u> Broad Location 2009 – 2026</p> <ul style="list-style-type: none"> • Thurrock Urban Area <ul style="list-style-type: none"> ○ Purfleet ○ West Thurrock/Lakeside ○ Grays ○ Tilbury including town centre • Land north of Tilbury (Green Belt) • London Gateway (former Shellhaven)

7.4.3 Table 21 also provides an overall appraisal of the three spatial options for development in the Green Belt (Stanford-le-Hope/Corringham, North East Grays and Tilbury).

Figure 5: Broad Locations of Development Map from LDF Preferred Options Core Strategy

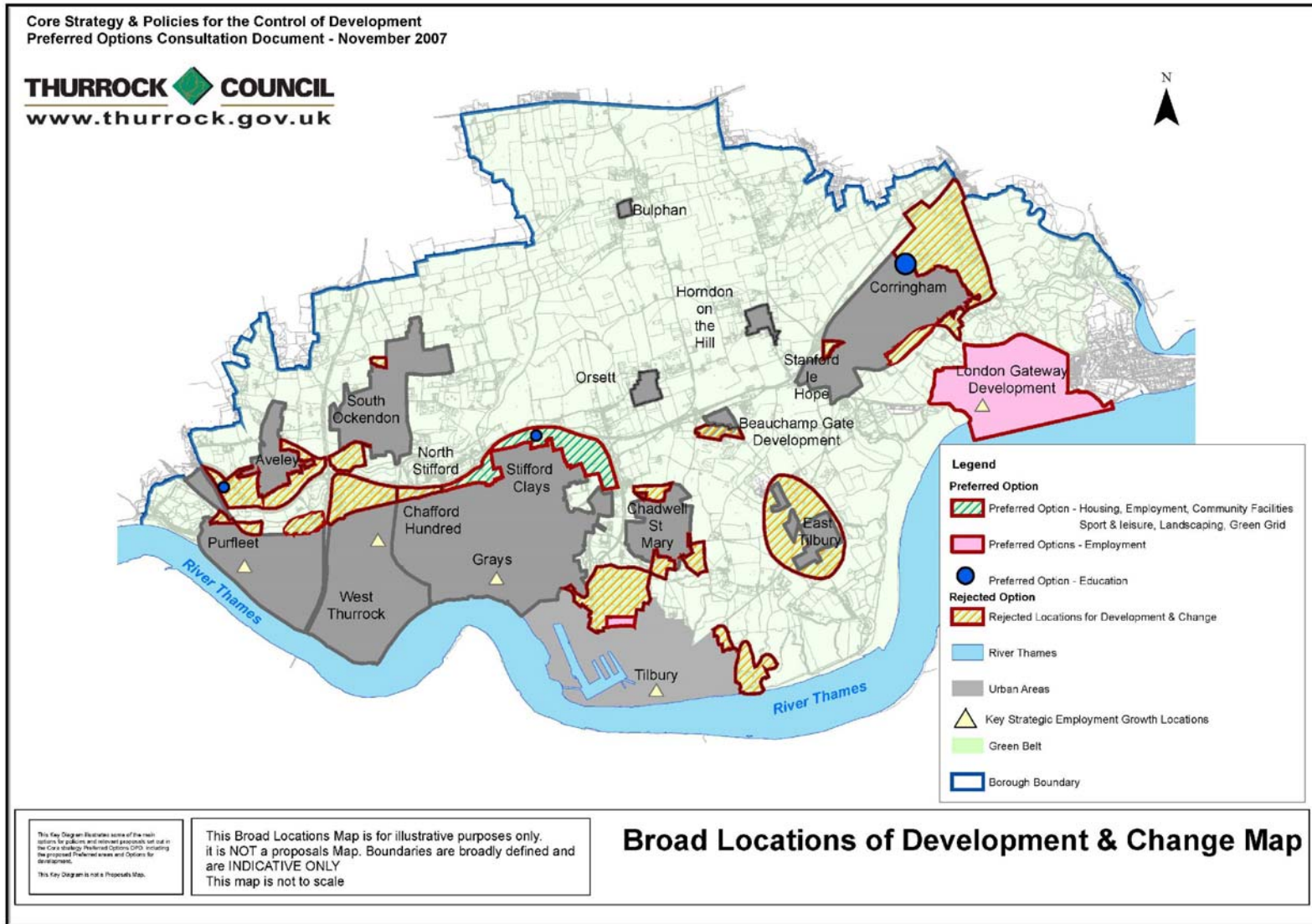
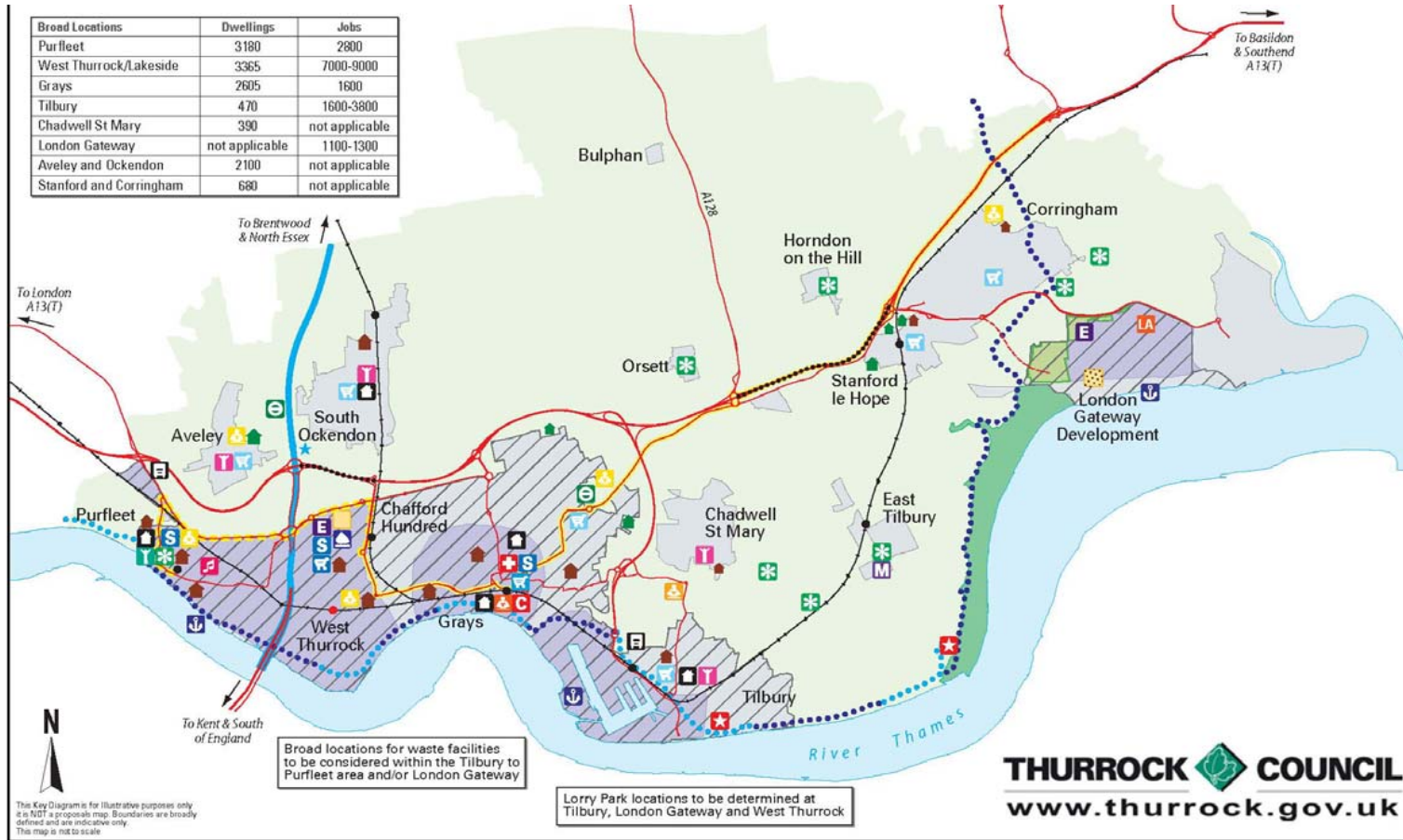


Figure 6: Broad regeneration areas in Thurrock (Hatched Purple) Proposed Submission version



Key Diagram for Thurrock Council Proposed Submission Draft

Core Strategy & Policies for Management of Development
Proposed Submission Draft DPD Document

This Key Diagram illustrates some of the main options policies and relevant proposals set out in the Core Strategy Proposed Submission Draft D1

This Key Diagram is not a Proposal Map.

8 Appraisal findings: Economy and Employment

8.1 Introduction

8.1.1 This section discusses the appraisal of the Core Strategy and Policies for the Management of Development DPD against the three SA objectives that relate to economy and employment:

- To attain sustainable levels of prosperity and economic growth (Sustainability objective (SO) 1).
- To increase economic diversity and increase the proportion of skills represented (SO 2)
- To encourage investment and to ensure that current and future residents want to live and work within the borough (SO 3)

8.1.2 This section also sets out the sustainability context, recommendations for mitigation and/or enhancement and monitoring that relate to the economy and employment theme.

8.2 Background

8.2.1 The economy is one of the three pillars of sustainable development. As such, it is therefore part of the foundations of a sustainable community. Fostering economic growth and diversification are important for creating a sustainable community but these should not sacrifice the quality of the environment or people's sense of wellbeing.

8.2.2 A healthy economy can be characterised by:

- A range of employment opportunities;
- Access to skills training and education;
- Economic growth;
- Inward investment;
- New business start-ups;
- A diverse range of business sectors;
- Low unemployment;
- Job satisfaction; and
- Resource use efficiency.

8.2.3 A key feature of a sustainable economy is a flexible and varied workforce that has access to training and education. Employment needs to not only provide the means to ensure basic survival but also that people have the opportunity to improve their quality of life.

8.3 Updated sustainability baseline and key sustainability issues

Updated sustainability baseline

8.3.1 The summary of the updated baseline for Thurrock in relation to this theme is presented below:

- Thurrock has been one of the most affected local authorities in the East of England by the recession in terms of growing unemployment. At the regional level, unemployment is said to be affecting men and young people disproportionately¹².
- The percentage of Jobseekers Allowance Claimants in December 2009 was 4.3% in Thurrock, 3.3% in the East of England and 4.1% nationally¹³. This represents an increase of 2.5% and is partly explained by the industrial structure of Thurrock and is similar to increases in other local authority areas within the Thames Gateway¹⁴.
- One of the key economic objectives for the Borough is to diversify the economy.
- Gross Value Added (GVA) has remained steady between 2001 and 2007. It is lower than regional averages¹⁵.
- The percentage of economically active people in 2008 was similar to regional and national averages¹⁶.
- The percentage of managers and professionals in Thurrock (33%) is lower than regional (45%) and national averages (43%). Conversely, the percentage of elementary occupations and process plant and machine operators is higher in Thurrock¹⁷.
- Average gross weekly pay in Thurrock was however higher in 2008 than the regional and national weekly pay¹⁸.
- Nearly 20% of Thurrock's working age population has no qualifications compared with 12% regionally and nationally. The percentage of working age population with the highest qualification (Level 4) is 17% in Thurrock versus 26% in the East of England and 29% nationally (2008 data)¹⁹.
- The percentage of adults in job related training is 9.8. This is considerable lower than regional and national averages and represents a decline from the 2005 peak of 18.7%²⁰.

Key sustainability issues

8.3.2 The key sustainability issues identified under Economy and Employment for Thurrock are as follows:

- Thurrock needs to diversify its economic base;

¹² InsightEast (2009) East of England Recession Impact, September 2009 [online] available: http://insighteast.org.uk/WebDocuments/Public/approved/user_9/recessionreportsep2009_1/Recessionreportsep2009.pdf (accessed: 21 January 2010)

¹³ Nomis – Official Labour Market Statistics [online] available at: <https://www.nomisweb.co.uk/reports/lmp/la/2038431778/report.aspx?town=thurrock> (accessed: 21 January 2010)

¹⁴ InsightEast (2009) East of England Recession Impact, September 2009 [online] available: http://insighteast.org.uk/WebDocuments/Public/approved/user_9/recessionreportsep2009_1/Recessionreportsep2009.pdf (accessed: 21 January 2010)

¹⁵ East of England Regional Economic Atlas: District & Unitary Indicators [online] available: http://www.insighteast.org.uk/WebDocuments/approved/FTPUploads/RES/RESIndicators_SingleMap_District/atlas.html (accessed: 21 January 2010)

¹⁶ Nomis – Official Labour Market Statistics [online] available at: <https://www.nomisweb.co.uk/reports/lmp/la/2038431778/report.aspx?town=thurrock> (accessed: 21 January 2010)

¹⁷ Nomis – Official Labour Market Statistics [online] available at: <https://www.nomisweb.co.uk/reports/lmp/la/2038431778/report.aspx?town=thurrock> (accessed: 21 January 2010)

¹⁸ Nomis – Official Labour Market Statistics [online] available at: <https://www.nomisweb.co.uk/reports/lmp/la/2038431778/report.aspx?town=thurrock> (accessed: 21 January 2010)

¹⁹ Nomis – Official Labour Market Statistics [online] available at: <https://www.nomisweb.co.uk/reports/lmp/la/2038431778/report.aspx?town=thurrock> (accessed: 21 January 2010)

²⁰ East of England Regional Economic Atlas: District & Unitary Indicators [online] available: http://www.insighteast.org.uk/WebDocuments/approved/FTPUploads/RES/RESIndicators_SingleMap_District/atlas.html (accessed: 21 January 2010)

- There is also a need to improve the education and skills of local people so they can benefit from future opportunities;
- Thurrock should maximise the benefits of the proposed regeneration of the Thames Gateway ;
- Currently, there is poor performance in terms of economic deprivation and unemployment; this has also been exacerbated by the recent economic crisis;
- There is a need to increase proportion of working age people in employment.

8.4 Appraisal findings

Spatial Policies

- 8.4.1 The spatial policies score well against SA objectives linked to economy and employment. The key spatial policy that will impact these SA objectives is CSSP2: Sustainable Employment Growth which is aspirational in terms of numbers of jobs and the diversification of Thurrock's economy. If the objectives of this policy are achieved then significant opportunities will emerge. However, it is important that the diversification of Thurrock's economy is aligned with improving the skills of the local population so that they can realise the benefits.
- 8.4.2 An important factor in realising the economic and employment objectives set by the Core Strategy will be the phasing and coordinated delivery of development. With particular respect to CSSP2: Sustainable Infrastructure, at present it is uncertain when the key strategic infrastructure projects that the Council has identified as essential to the delivery of the Core Strategy will be delivered.

Thematic Policies

- 8.4.3 The majority of policies are likely to have either positive or neutral impacts on economic and employment objectives.
- 8.4.4 It was considered that CSTP6: Strategic Employment provision would lead to significant positive benefits against SA Objective 1 (to obtain sustainable levels of prosperity and economic growth) and SA Objective 2 (to encourage investment and to ensure that current and future residents want to live and work within the borough) due to the safeguarding of existing employment land and additional high levels of employment land provided by the policy. The policy also supports the framework provided by CSSP2: Sustainable Employment Growth in the delivery of Key Strategic Economic Hubs that will enable the diversification of the Borough's economy.
- 8.4.5 There are several uncertainties with respect to the impact of some policies against the economy and employment. Whilst CSTP14: transport in the Thurrock Urban Area and CSTP15: Transport in Greater Thurrock are acknowledged to improve linkages between Thurrock and the surrounding region thereby attracting investment, there are a greater number of factors which influence decisions on where to live and invest. Similarly, the extent to which CSTP16: National and Regional Transport Networks and CSTP17: Strategic Freight Movement and Access to Ports influence investment is not clear.
- 8.4.6 Uncertainties with respect to the impact of CSTP26: Renewable or Low-Carbon Energy Generation stem from a lack of understanding on whether the skills needed to benefit from

growth in the design, operation, and maintenance of energy-efficient technologies are available within the local or sub-regional economy.

Policies for the Management of Development

- 8.4.7 Similar to the Thematic Policies, Policies for the Management of Development have largely positive or neutral effects against economic and employment sustainability objectives. However, there are also uncertainties regarding whether the skills required to undertake new jobs in the design, construction/installation and ongoing maintenance of local renewable and low carbon sources are available locally or sub-regionally.

8.5 Recommendations for mitigation and/or enhancement

- 8.5.1 The key recommendation for this SA theme is to ensure that the appropriate skills are available within Thurrock to benefit from the job opportunities.

8.6 Monitoring

- 8.6.1 To monitor the impacts of the DPD on this sustainability theme, monitoring of the following indicators should be undertaken:
- Employment rate within Thurrock
 - Average earnings of employees in Thurrock
 - Total amount of additional employment Floor space – by type
 - Employment land available – by type
 - Total amount of floorspace for ‘town centre uses’
 - Number of VAT registrations for business

9 Appraisal findings: Sustainable Land Use

9.1 Introduction

9.1.1 This section discusses the appraisal of the Core Strategy and Policies for the Management of Development DPD against the two SA objectives that relate to sustainable land use:

- To deliver sustainable patterns of location of development including employment and housing (SO 4a)
- To make the best use of land in the borough, including reuse of previously developed land (SO 5)

9.1.2 This section also sets out the sustainability context, recommendations for mitigation and/or enhancement and monitoring that relate to the sustainable land use theme.

9.2 Background

9.2.1 Using land sustainably means land and resources are protected and enhanced for current and future generations. In the UK, there are numerous brownfield sites, which have previously been developed but are no longer in use. Government policy advocates the use of this land for future development to focus development away from greenbelt areas or other areas of environmental value.

9.2.2 There is growing conflict in some areas between meeting government aspirations for development on brownfield land and in preserving biodiversity. This is because many sites have been vacant for enough time to allow the establishment of floral and faunal communities, some of which are now recognised for their biodiversity value.

9.2.3 Much of Thurrock has historically contained large areas of industrial and derelict land associated with mineral extraction and the industrial nature of the riverfront areas, including oil, cement works, scrap yards etc. Significant reduction in industry throughout the riverfront areas has led to a reduction or termination of many works and subsequently brownfield land has become available for development.

9.2.4 The majority of potential brownfield development sites in Thurrock are located within the existing urban area and a large proportion of these are associated with past industrial uses within close proximity to the River Thames. Consequently, a high proportion of potentially developable brownfield sites are situated within the floodplain of the tidal River Thames.

9.3 Updated sustainability baseline and key sustainability issues

Updated sustainability baseline

9.3.1 The summary of the updated baseline for Thurrock in relation to this theme is presented below:

- In 2007/0, 96.9% of new housing and 100% of employment development was on previously developed land, versus the national target of 60% (AMR);
- Over 60% of Thurrock's land area is Greenbelt land;

- Thurrock’s Core Strategy highlights that a large proportion of Thurrock’s urban areas are located within Flood Zone 3, translating to approximately 11,000 properties currently at risk of flooding.
- The majority of agricultural land in Thurrock is Grade II and III. There is a small area of Grade I land which is in the west.

Key sustainability issues

9.3.2 The key sustainability issues identified under Sustainable Land Use for Thurrock are as follows:

- Efficient use of natural resources, particularly water should be ensured.
- Previously developed land should be reused wherever possible, in order to protect key environmental resources (agricultural land, threatened habitats, mineral and historic resources etc);
- Thurrock should aim to ensure a higher quality public realm and any new development should contribute to improving or increasing public spaces;
- Development should be primarily directed to brownfield land in existing urban areas which have good public transport access;
- Thurrock should consider the impacts of all types of flooding on development and development should avoid increasing flood risk.

9.4 Appraisal findings

Spatial Policies

9.4.1 Spatial Policies performed well against SA objectives related to sustainable land use. In particular, significant positive benefits are likely to emerge through several policies due to the direction of the majority of new development (92%) to PDL and by concentrating development in areas that have a range of services and are well served by public transport. These policies should help to alleviate pressure on greenfield development and help to reduce dependence on private car whilst improving the viability of public transport.

Thematic Policies

9.4.2 The majority of policies are likely to have either positive or neutral effects in terms of sustainable land use.

9.4.3 Significant positive benefits are likely to emerge in terms of sustainable land use due to the DPD’s commitment to maximise the use of redundant and underused land in the borough by increasing capacity and by setting density targets (CSTP1: Strategic Housing Provision).

9.4.4 The only uncertainties relate to the potential effects on biodiversity that may emerge by development on brownfield land with high biodiversity value as well as the effects that concentrating development may have on the existing built environment in terms of its character and distinctiveness.

Policies for the Management of Development

- 9.4.5 The majority of the Policies for the Management of Development are likely to lead to either positive or neutral effects. These reasons for these judgements are similar to those noted for the Thematic Policies. There were no noted uncertainties or negative effects that are likely to emerge.

9.5 Recommendations for mitigation and/or enhancement

- 9.5.1 The DPD policies performed well against the sustainable land use theme. Recommendations for the mitigation of potential impacts of concentrating development on redundant and underused land, including 92% of new development to be located on Previously Developed Land (PDL), on biodiversity found in these areas have been addressed in Section 11.5.

9.6 Monitoring

- 9.6.1 To monitor the impacts of the DPD on this sustainability theme, monitoring of the following indicators should be undertaken:
- Total amount of employment floorspace on PDL – by type
 - New and converted dwellings – on PDL
 - PDL that has been vacant or derelict for more than 5 years

10 Appraisal findings: Flood Risk

10.1 Introduction

10.1.1 This section discusses the appraisal of the Core Strategy and Policies for the Management of Development DPD against the SA objective that relates to flood risk:

- Minimise the risk of flooding taking account of climate change (SO 4b)

10.1.2 This section also sets out the sustainability context, recommendations for mitigation and/or enhancement and monitoring that relate to the flood risk theme.

10.2 Background

10.2.1 Much of Thurrock has historically contained large areas of industrial and derelict land associated with mineral extraction and the industrial nature of the riverfront areas, including oil, cement works, scrap yards etc. Significant reduction in industry throughout the riverfront areas has led to a reduction or termination of many works and subsequently brownfield land has become available for development.

10.2.2 Thurrock's geography also imposes a flood risk to development, originating from the tidal River Thames and other tidal systems in addition to fluvial, surface water, groundwater and other forms of flood sources. Climate change will only exacerbate the flood risk in the area.

10.2.3 The majority of potential brownfield development sites are situated within the existing urban area, a large proportion of which is associated with past industrial uses within close proximity to the River Thames. Consequently, a high proportion of potentially developable brownfield sites are situated within the floodplain of the tidal River Thames.

10.3 Updated sustainability baseline and key sustainability issues

Updated sustainability baseline

10.3.1 The summary of the baseline for Thurrock in relation to this theme are as follows:

- Thurrock's Core Strategy highlights that a large proportion of Thurrock's urban areas are located within Flood Zone 3, translating to approximately 11,000 properties currently at risk of flooding.
- In 2007/10, 96.9% of new housing and 100% of employment development was on previously developed land, versus the national target of 60% (AMR)
- The Council will seek to ensure that 90% of new housing is delivered on PDL in the Thurrock Urban Area so it is likely that a large proportion of development within Thurrock will have to take place on land identified to be at risk of flooding²¹

²¹ Thurrock Council (2009). *Thurrock PPS25 Sequential Test – Broad Regeneration Areas*.

Key sustainability issues

- 10.3.2 The key sustainability issues identified under Flood risk for Thurrock are as follows:
- Thurrock should consider the impacts of all types of flooding on development and development should avoid increasing flood risk;
 - Thurrock policies should promote effective flood risk management in line with PPS25.

10.4 Appraisal findings

Spatial Policies

- 10.4.1 The spatial policies covering housing, employment and infrastructure provision (CSSP1 to 3) are all likely to have negative impacts on flood risk. Parts of the areas of Thurrock where most of the development will occur (including Grays, Purfleet, Tilbury, London Gateway) are at risk of flooding. Thurrock Council will need to continue liaising with the Environment Agency and use the findings of the Strategic Flood Risk Assessment to manage and reduce the risk.
- 10.4.2 Policy CSSP5 Sustainable Greengrid is likely to result on positive effects on this SA objective through reducing run-off and providing permeable surfaces.

Thematic Policies

- 10.4.3 As with the spatial policies above, those thematic policies that set out development or growth are likely to have a negative impact on flood risk. In particular: CSTP1: Housing, CSTP6: Employment provision and CSTP7: Network of Centres.
- 10.4.4 Several thematic policies score positively against this objective and should contribute to mitigating the impacts of new development on flood risk. This policies are, CSTP13: Emergency services and utilities which addresses the need to respond to flood related and other emergencies thus reducing potential impacts on Thurrock's population. CSTP25: Addressing climate change includes a requirement to reduce the impacts of future flooding which may be exacerbated by climate change. CSTP27: Management of flood risk sets out the requirement of undertaking a Sequential, and where necessary an Exception Test, as set out in PPS25 allocating sites for development and an Emergency Plan for the Borough will be completed.
- 10.4.5 To a lesser extent, policies CSTP18: Green infrastructure and CSTP19: Biodiversity should also result in positive impacts on this SA objective. Green spaces and natural areas can contribute to reducing run-off from built areas and can also provide flood storage.

Policies for the Management of Development

- 10.4.6 With the exception of PMD15 Flood Risk Assessment, these policies are not likely to result on significant impacts on this SA objective. PMD15 sets out a requirement for developers to provide site specific Flood Risk Assessments. This policy scores favourably against this SA objective as it will contribute to managing the risk of flooding at the development level.

10.5 Recommendations for mitigation and/or enhancement

- 10.5.1 The key mitigation recommendation is to implement the DPD policies that cover emergency planning, flood risk management and climate change adaptation.

10.6 Monitoring

- 10.6.1 To monitor the impacts of the DPD on this sustainability theme, monitoring of the following indicators should be undertaken:
- Number of planning permissions granted contrary to Environment Agency advice on flooding and water quality
 - Number of properties at risk of flooding from all sources

11 Appraisal findings: Biodiversity, Flora and Fauna

11.1 Introduction

11.1.1 This section discusses the appraisal of the Core Strategy and Policies for the Management of Development DPD against the SA objective that relates to biodiversity, flora and fauna:

- To protect and enhance Thurrock's biodiversity and geodiversity, including all designated sites (SO 6)

11.1.2 This section also sets out the sustainability context, recommendations for mitigation and/or enhancement and monitoring that relate to the biodiversity, flora and fauna theme.

11.2 Background

11.2.1 Biodiversity is the term given to the diversity of life on Earth. This includes the plant (flora) and animal (fauna) species that make up our wildlife and the habitats in which they live. It also includes micro-organisms and bacteria. Formally, the Convention on Biological Diversity (CBD) defines biodiversity as:

"The variability among living organisms from all sources including terrestrial, marine and other aquatic ecosystems, and the ecological complexes of which they are part, this includes diversity within species, between species and ecosystems²²."

11.2.2 As well as being important in its own right, we value biodiversity because of the ecosystem services it provides, such as flood defence and clean water; and the contribution that biodiversity makes to wellbeing and sense of place.

11.3 Updated sustainability baseline and key sustainability issues

Updated sustainability baseline

11.3.1 The summary of the baseline for Thurrock in relation to this theme are as follows:

- Thurrock contains one Ramsar Site and SPA, 12 SSSIs, 12 Wildlife Corridors, 2 Local Nature Reserves and 70 Wildlife sites
- 85% of the SSSI area in the Borough is in favourable or recovering condition (2009). The current Government target is to achieve 95% of SSSI area in favourable or recovering condition by 2010.
- Some brownfield land in the Borough has high biodiversity value. Promoting development on brownfield land that is sympathetic to biodiversity is a key challenge²³.

Key sustainability issues

11.3.2 The key sustainability issues identified under Biodiversity for Thurrock are as follows:

²² CBD (no date). *Convention on Biological Diversity* [online] available at: <http://www.cbd.int/> (accessed 21 January 2010).

²³ Thurrock Council (2007) Biodiversity Action Plan [online] available at: http://www.thurrock.gov.uk/countryside/pdf/biodiversity_action_2007.pdf (accessed: 21 January 2010)

- The Greengrid should be preserved and enhanced Preserve and enhance the Green Grid of open space;
- The protection of priority species for Thurrock (as identified in the Biodiversity Action Plan) alongside nationally protected species should be considered during development and regeneration;
- Existing biodiversity and habitats should be maintained and where possible enhanced;
- New developments should include features that will enhance biodiversity where possible; and
- Development should not adversely impact on designated sites of national, regional and local nature conservation importance.

11.4 Appraisal findings

Spatial Policies

- 11.4.1 All the spatial policies will have an impact on the SA objective relevant to this sustainability theme, with a mixture of positive and negative impacts. CSSP5 – Sustainable Greengrid should have a significant positive impact as it includes biodiversity as a key element and aims to safeguard biodiversity across the borough. It also promotes local-scale assets to include biodiversity interests and local nature reserves. CSSP4 – Sustainable Green Belt should have a lesser positive impact particularly where Green Belt land is released to the North of Tilbury.
- 11.4.2 However, some adverse effect is anticipated as a result of the other three policies. The development proposed for CSSP1 – Sustainable Housing and Locations, CSSP2 – Sustainable Employment Growth, and CSSP3 – Sustainable Infrastructure, is likely to negatively impact upon biodiversity and will need to be managed. It will be particularly important to build biodiversity enhancements into new development, particularly as some of Thurrock’s brownfield sites are currently rich in wildlife, and some of the thematic policies may help with this.

Thematic Policies

- 11.4.3 Less than half of the thematic policies are anticipated to have an impact on this sustainability theme.
- 11.4.4 The Housing policy CSTP1 – Strategic Housing Provision, could have a negative impact due to the amount of housing to be provided. Most development will be located on previously developed land and brownfield sites in the borough are also known to be rich in wildlife, and thus the impacts of this policy will need to be carefully managed and an attempt made to enhance biodiversity and mitigate any loss. Other thematic policies may assist in this. For example, the other Housing policy that has an effect is CSTP5 – Neighbourhood Renewal, which is likely to have a positive impact on urban biodiversity through improvements to the external environment such as a green corridor network and enhancement of open spaces. Equally, the only Employment policy with a likely impact is CSTP8 – Viability and Vitality of Existing Centres, which could have some positive benefit by improving the wider environment through ensuring that new development enhances biodiversity.
- 11.4.5 For all of the Transport and Access policies (CSTP14 to CSTP17) there are uncertainties regarding the impact on biodiversity. The impact that the creation of SERT and other public

transport links will have on biodiversity is unclear in Policies CSTP14 and CSTP15 and CSTP16. Although creation of core walking and cycling routes should assist in delivering biodiversity enhancement and habitat corridors, there may be negative impacts upon biodiversity and habitat corridors resulting from construction and operation of these core routes. It is also unclear whether the provision of lorry parks in CSTP17 will take in to account sites of biodiversity interest and this could be specified. Similarly, policies CSTP29, CSTP30 and CSTP31 could specify that waste and minerals sites safeguard and enhance, where possible, existing biodiversity; although on balance these policies should have either a positive or uncertain impact on this SA objective, because they promote good environmental practice. This will depend upon criteria and policies outlined in the Minerals and Waste Development Plan Document (MWDPD).

- 11.4.6 The majority of the Environment policies have a positive impact on this SA objective, particularly CSTP18 – Green Infrastructure and CSTP19 – Biodiversity. It is possible that Policy CSTP21 – Productive Land could have a negative impact on biodiversity such as the impact of agriculture on species richness, a reduction in species diversity and loss of habitat range, although measures to limit impact are set out in the policy.
- 11.4.7 By managing and reducing flood risk, Water, Riverside and coastal Policy CSTP27 should have positive impacts on biodiversity, as it seeks to ensure the delivery of environmental enhancement measures including in new development.

Policies for the Management of Development

- 11.4.8 Not many of these policies are anticipated to have an impact on biodiversity and most policies will have positive impacts. However, two of the Built Environment policies (PMD1 and PMD4) are expected to have a positive impact against biodiversity, by careful location of sensitive land uses where designated biodiversity sites are concerned, and by safeguarding sites.
- 11.4.9 All the Natural Environment policies are expected to have a positive impact on this SA objective, by: safeguarding open spaces and the green grid (PMD5), safeguarding nature conservation and biodiversity by restricting development in the Green Belt (PMD6) and not permitting the loss, or partial loss, of a designated biodiversity site except in exceptional circumstances and where mitigation is in place (PMD7). PMD7 also requires development proposals to incorporate biodiversity features in to design as far as possible.

11.5 Recommendations for mitigation and/or enhancement

- 11.5.1 Biodiversity should be enhanced where possible and at a minimum loss should be mitigated in line with policy CSTP22 – Design which requires developers to address the sensitivity of an area, including biodiversity.
- 11.5.2 The location of development (waste sites, housing, transport etc) could potentially have a negative impact on biodiversity if not carefully managed. Several of the policies hold uncertainties with regards to land allocation (e.g. for housing, transport routes, lorry parks, minerals and waste) and could specify if e.g. transport routes will include green corridors and features that might enhance biodiversity. The importance of mitigating biodiversity impact through design and safeguarding/restoring sites (and enhancing biodiversity where possible) could be emphasised in some of the policies, although other policies should assist in this such as CSTP19: Biodiversity and PMD7 – Biodiversity and Development, and more specific criteria

as should be detailed within the Minerals and Waste Development Plan Document (MWDPD) and other policies.

- 11.5.3 Appropriate land management should also be considered for Policy CSTP21 – Productive Land, such as the conservation and maintenance of onsite biodiversity, and this could be linked it to other measures promoted in the policy for the rural economy such as agri-environment schemes and woodland creation.
- 11.5.4 Policy CSTP19: Biodiversity and its supporting text could make more of a link between biodiversity and associated habitats and landscape character and distinctiveness. The Policy's supporting text mentions that there is a large amount of unmanaged brownfield land with significant levels of biodiversity, but the policy does not stipulate whether, and how, this biodiversity on such sites will be protected and balanced with development.

11.6 Monitoring

- 11.6.1 To monitor the impacts of the DPD on this sustainability theme, monitoring of the following indicators should be undertaken:
- Change in areas of biodiversity importance
 - Improving local biodiversity – active management of local sites
 - Number of residents involved in the management of open space
 - Number of parks achieving green flag status

12 Appraisal findings: Air Quality and Noise

12.1 Introduction

12.1.1 This section discusses the appraisal of the Core Strategy and Policies for the Management of Development DPD against the SA objective that relates to air quality and noise:

- To protect and enhance the environment through reducing the emissions of pollutants (SO₇).

12.1.2 This section also sets out the sustainability context, recommendations for mitigation and/or enhancement and monitoring that relate to the air quality and noise theme.

12.2 Background

Air Quality

12.2.1 The lower layers of the atmosphere are composed of a mixture of substances, principally nitrogen, oxygen and carbon dioxide, particulate matter and water vapour. In addition there are hundreds of other substances present in the atmosphere at trace concentrations and the abundance of these trace constituents changes constantly as they are acted upon by numerous atmospheric processes. Under the right conditions an airborne pollutant could be deposited onto a particle or surface, it could be released from a surface back into the atmosphere, it could be captured by a water droplet or it could be converted into a different substance by a chemical reaction. Some pollutants can also be created by chemical reactions from other substances.

12.2.2 Development can result in additional releases of a number of pollutants to the atmosphere, resulting in concentrations of substances becoming elevated above their naturally occurring levels. Airborne pollutants are normally transported across administrative boundaries and local emissions can result in effects at local, regional, national or international scales. Adverse effects are most likely to take the form of acute or chronic impacts on human health, flora or fauna, degradation of the material of buildings and structures or longer term changes to local, regional or global climate.

12.2.3 Emissions to air may be generated during the construction, operational and decommissioning phase of a development and may be caused by activities undertaken within the development area or they may result from the affect of the development on other existing sources of emissions (typically the local road network).

12.2.4 Air quality is a topic set out in the SEA Directive which should be examined when the impacts of a plan or programme on the environment are being assessed. It is essential that the DPD does not have adverse effects on air quality.

Noise

12.2.5 Noise has been described as 'unwanted sound' and affects many people. Sources of noise can include motor vehicles, aircraft, railway rolling stock and industrial activity. In addition, neighbourhood noise can include local scale activities such as unwanted music, construction

- 12.2.6 This section discusses the appraisal of the Core Strategy and Policies for the Management of Development DPD against the three SA Objectives that relate to air quality and noise.

12.3 Updated sustainability baseline and key sustainability issues

Updated sustainability baseline

- 12.3.1 The summary of the baseline for Thurrock in relation to this theme are as follows:

- The majority of air pollution in Thurrock is caused by motor vehicles.
- There are currently 15 AQMAs (Air Quality Management Areas) in Thurrock. These have been designated by the Council for nitrogen dioxide (NO₂) and/or PM₁₀ close to busy roads and junctions²⁴.
- In order to meet the annual mean objective for NO₂ in two of the AQMAs, a 30% reduction in Heavy Goods Vehicles traffic may be required.
- The overall number of noise complaints received by the Council between 1999 and 20036 has increased. In 1999, 943 complaints were received which subsequently fell in 2001 and rose between 2001 and 2003 to 1,197. In 2006, Thurrock received a total of 1682 noise related complaints

Key sustainability issues

- 12.3.2 The key sustainability issues identified under Air Quality and Noise for Thurrock are as follows:

- Current levels of air pollution which are linked to motor vehicles;
- The need to reduce traffic levels within the Borough.
- The need to reduce noise levels and associated complaints in the Borough.

12.4 Appraisal findings

Spatial Policies

- 12.4.1 Two of the spatial policies could have some adverse effect on air quality and noise. Green infrastructure promotes cleaner air and aids in the absorption and minimisation of noise pollution and so Policy CSSP5 – Sustainable Greengrid is likely to have some positive effect.
- 12.4.2 By supporting economic growth and expansion of business, Policy CSSP2 – Employment Growth could result in more air and noise pollution which new and existing businesses should seek to minimise. This will be important to achieve the Council's objective of making Thurrock an attractive and healthy place to live. New infrastructure delivered through Policy CSSP3 will also result in air and noise pollution that will need to be mitigated through design.

Thematic Policies

- 12.4.3 None of the thematic policies are expected to have a negative impact against this sustainability theme, but there are a few uncertainties.

²⁴ Thurrock Council (2009) Updating and Screening Assessment for Thurrock Council [online] available at: http://www.thurrock.gov.uk/environment/pollution/pdf/air_quality_screening_assess2009.pdf (accessed: 21 January 2010)

- 12.4.4 Policy CSTP8 – Vitality and viability of existing centres is likely to minimise noise and air pollution by managing road traffic and increasing public transport use. However, new businesses and premises under policy CSTP6 – Strategic Employment Provision will inevitably lead to an increase in air and noise pollution the resources used and waste produced, and this will have to be mitigated through the implementation of other DPD policies. For example, the Climate Change policies (CSTP25 and 26) are expected to have some positive benefit by encouraging the reduction of emissions and the use of renewable carbon technologies. It is assumed employment premises are factored in to ‘new development’. CSTP22 – Thurrock Design requires developers to address the sensitivity of an area and promotes good design which should minimise pollution. CSTP18 – Green Infrastructure should also have a positive impact by increasing linkages between sites and thus promotes sustainable transport and a reduced negative impact on air quality and noise, and the natural environment is also important for absorbing and minimising noise pollution.
- 12.4.5 All the Transport and Access policies are expected to have some positive benefit against this SA objective; by increasing the use of public transport and sustainable transport, minimising the use of cars and by managing traffic more efficiently. These policies will be particularly important for addressing key pollution issues in Thurrock: the majority of air pollution in Thurrock is caused by motor vehicles and the 15 AQMAs in Thurrock are close to busy roads and junctions. In addition, Policy CSTP17 should also assist in the need to reduce Heavy Goods Vehicles traffic by 30% in order to meet the annual mean objective for NO₂, by facilitating a shift to rail and river freight. It should be noted, however, that although Policy CSTP16 supports a modal shift and should therefore contribute to emissions reductions, measures to increase the frequency of inter-urban public transport routes may offset emissions savings from a reduction in private car use.
- 12.4.6 The impact of Policy CSTP31: Provision of Minerals has been scored as uncertain against this theme. Although the Policy sets out restrictions on permitting mineral extraction and also promotes good environmental practice, additional allocation of land and the ‘Preferred Areas’ for mineral extraction may increase pollution, dependent upon the extraction process. However, criteria and policies outlined in the Minerals and Waste Development Plan Document (MWDPD) could on balance result in a positive impact (e.g. restoration of sites to previous or enhanced state). Policy CSTP29 – Waste Strategy should reduce the emissions of pollutants, given waste-minimisation measures, general environmental principles and ensuring that the recovery or disposal of waste takes place without endangering human health.

Policies for the Management of Development

- 12.4.7 The Policies for the Management of Development should in general have positive or no sustainability effects. Policy PMD1 – Minimising Pollution and Impacts on Amenity will be particularly important for this SA objective.
- 12.4.8 Three of the four Transport and Access policies are anticipated to have a positive impact against this theme. In particular, PMD9 – Road Network Hierarchy avoids causing congestion as measured by link and junction capacities, and is therefore particularly important at addressing the 15 AQMAs in Thurrock. Policy PMD10 advocates the use of travel assessments and travel plans and so should also minimise congestion and encourage more sustainable forms of transport and less reliance on the car. Policy PMD11 – Freight Movement, will be particularly important in addressing the need in Thurrock to reduce Heavy Goods Vehicles traffic by 30% in order to meet the annual mean objective for NO₂.

12.5 Recommendations for mitigation and/or enhancement

- 12.5.1 New development proposed (housing, employment, infrastructure etc) should result in more pollution. The policies for employment could include encouraging new and existing businesses to minimise their impact and new infrastructure delivered through Policy C SSP3 should mitigate pollution from construction through design. Encouraging the use of renewable energy and sustainable building and design, and addressing climate change in both the thematic and policies for the management of development, should also assist in the mitigation of pollution. This will be important to achieve the Council's objective of making Thurrock an attractive and healthy place to live. Green infrastructure and biodiversity policies will also be important towards achieving positive sustainability outcomes in relation to this theme (offsetting pollution from noise, air, water run-off etc) and this link could be emphasised.
- 12.5.2 Productive land, waste and minerals policies can potentially also have a negative impact without careful mitigation through land and process management, although criteria and policies outlined in the Minerals and Waste Development Plan Document (MWDPD) should assist in mitigation. Wherever possible an improvement, rather than offsetting, should be sought.
- 12.5.3 The transport policies (thematic and management of development) will be very important in securing a positive impact against this SA objective. Policy PMD10 could be clearer by advocating sustainable forms of transport and minimal car use as a part of travel plans.

12.6 Monitoring

- 12.6.1 To monitor the impacts of the DPD on this sustainability theme, monitoring of the following indicators should be undertaken:
- PM_{2.5}, PM₁₀ and NO_x levels;
 - Congestion;
 - % Mode Travel to work;
 - Number of green travel plans; and
 - Number and nature of noise complaints.

13 Appraisal findings: Cultural Heritage, Landscape and Material Assets

13.1 Introduction

13.1.1 This section discusses the appraisal of the Core Strategy and Policies for the Management of Development DPD against the SA objective that relates to cultural heritage, landscape and material assets:

- To protect and enhance landscape character, local distinctiveness and historic built heritage (SO 8)

13.1.2 This section also sets out the sustainability context, recommendations for mitigation and/or enhancement and monitoring that relate to the cultural heritage, landscape and material assets theme.

13.2 Background

Cultural Heritage

13.2.1 Cultural heritage assets could be considered to be:

- Archaeological remains, both above and below ground (i.e. buried remains and standing buildings), known and unknown;
- Historic buildings and sites (including listed buildings, cemeteries and burial grounds, parks, gardens, village greens, bridges and canals);
- Historic areas/ landscapes (including towns and villages in whole or in part - often designated as Conservation Areas); and
- Other structures of architectural or historic merit.

13.2.2 Cultural Heritage includes Ancient Monuments and Sites. These are often protected by law and are looked upon as essential for tourism. But they are also of great importance for the identity of a society. Everyday cultural heritage could be considered to be the different elements of our environment displaying characteristics inherited from past populations. Unique heritage may be defined as the most ancient parts of the landscapes and cities, including monuments and historical importance.

13.2.3 It is easier to describe the impact concerning unique heritage. It can be damaged directly through demolition or indirectly by pollution, fragmentation or reduced care. It is more difficult to find out the impact on the historical traits in the ordinary present landscape.

13.2.4 Almost all sites on mainland Britain have been previously occupied by humans and are therefore of potential historical interest. Archaeology is a vital component of recreation, since many people enjoy visiting archaeological sites and studying archaeological remains. It can contribute to education where it can promote an understanding of the role of the past and its relevance to today's society. Britain's historic heritage is also important to the tourism industry. It attracts visitors from all over the world and, if well interpreted and presented it can be an important financial asset.

- 13.2.5 However, archaeological and other historical remains are a fragile and finite resource that needs to be carefully managed and conserved.

Landscape

- 13.2.6 Landscape has been defined as:

“an important national resource... an outstanding natural and cultural inheritance which is widely appreciated for its aesthetic beauty and its important contribution to regional identity and sense of place. Although it is subject to evolution and change, the landscape is recognised as a resource of value to future generations²⁵.”

- 13.2.7 Landscape is more than just a backdrop to our lives; it is a source of invaluable economic and spiritual resources, it provides us with a historic record of human activity and helps us define our sense of who we are. The diversity of landscape is due to both physical factors and people's interactions with the land, thus shaping landscapes of outstanding scenic, historic or scientific interest.

- 13.2.8 An attractive landscape can contribute to peoples' enjoyment of their built and natural environment; can attract investment and assist social and economic progress; and, can promote biodiversity, reduce surface run-off, as well as carbon fixation. Landscape can also contribute to visual amenity, i.e. the popularity of an area, site or view in terms of visual perception

- 13.2.9 The following factors can contribute to the landscape:

- Physical: geology, landform, climate and micro-climate, drainage, soil, ecology (including both flora and fauna);
- Human: archaeology, landscape history, land use, buildings and settlements, recreation opportunities, enjoyment of access;
- Visual, e.g. proportion, scale, enclosure, texture, colour, views;
- Other senses, e.g. sounds, smells, tastes, touch;
- Associations e.g. emotional connections, physical connections with other places;
- Historical, e.g. history of settlements, special events; and
- Cultural, e.g. well known personalities, literature, painting, music.

- 13.2.10 Landscapes of particular environmental interest are primarily nationally designated landscapes - National Parks, Areas of Outstanding Natural Beauty (AONBs) and non-statutory Heritage Coasts.

²⁵ Highways Agency (no date). *Design Manual for Roads and Bridges* [online] available at: <http://www.standardsforhighways.co.uk/dmrb/vol11/section3/11s3p05.pdf> (accessed 19 January 210).

Material Assets

- 13.2.11 In the past, the definition of ‘material assets’ has been widely interpreted. Essentially, the assets should be physical assets, which are beneficial to the community. Material assets can be used a catch-all phrase for a range of items in the built environment including:
- Housing;
 - Recreational facilities (playgrounds, etc.);
 - Utility supply networks (water, electricity including renewable generation, etc.);
 - Flood defences;
 - Infrastructure (e.g. roads);
 - Other public buildings (excluding those included in other SEA topics, for example, cultural heritage assets);
 - Potential future resources; and
 - Community services and facilities (schools, doctors, youth centres, etc.)
- 13.2.12 The quality and availability of the material assets in an area have important implications for the viability and sustainability of a community. The construction, location, operation and status of these material assets is also closely linked to the environmental condition of an area and is therefore connected to other SEA topics such as water, soils, biodiversity, human health, cultural heritage and population.

13.3 Updated sustainability baseline and key sustainability issues

Updated sustainability baseline

- 13.3.1 The summary of the baseline for Thurrock in relation to this theme are as follows:
- Thurrock contains a number of historic assets including seven conservation areas, 239 listed buildings, 16 Scheduled Ancient Monuments, one park/garden on the Register of Parks and Gardens of Special Interest and 23 Ancient woodlands.
 - The landscape of the Borough divides roughly into industrial/urban land south of the A13 and mixed urban, village and rural land to the north of the A13. Approximately 60% of the Borough is open countryside, predominately agricultural land and dispersed villages²⁶.
 - Thurrock contains a number of distinct landscape types including the coastal marshes, the Thames terrace, the rolling hills in the north and the urban fringe.
 - Over half of the Borough has been designated as Landscape Improvement Area and they are in need of remedial treatment to improve their environmental quality. These include areas of derelict land and former mineral workings.
 - The Open Space Strategy identifies deficiencies in several types of open spaces. The study shows that the entire Borough is deficient in some form of parks. The majority of the borough, with the exception of land surrounding Mucking Flats and Fobbing Marshes is deficient in ‘natural and semi-natural greenspace.’

²⁶ Thurrock Council [online] Landscape and nature conservation, available at: http://www.thurrock.gov.uk/planning/strategic/content.php?page=factsheet_05 (accessed: 21 January 2010)

- The assessment of baseline infrastructure²⁷ shows high levels of deficit as compared with the current population. This includes:
- Social and community infrastructure – substantial deficits, particularly within education, health and community centres;
- Waste water network – requires substantial investment although Thames Water do not anticipate that a new sewage treatment works is required as a result of growth scenarios;
- Road - Significant improvements in highway capacity will be required by 2021 as well as extensive road improvements;
- Rail - To accommodate anticipated levels of development platforms lengths on both the Ockendon and Purfleet branches will need to be increased and a second track on the Ockendon branch and improved signalling.

Key sustainability issues

13.3.2 The key sustainability issues identified under Cultural Heritage, Landscape and Material Assets for Thurrock are as follows:

- Previously developed land should be reused wherever possible, in order to protect key environmental resources (agricultural land, threatened habitats, mineral and historic resources etc);
- Enhancing the landscape, including historic, built and natural landscape, should be taken into account as part of any development;
- Every development should contribute to enhancing the public realm, providing open space and providing a ‘sense of place’;
- Natural resources, including water and land, should be protected and used efficiently.

13.4 Appraisal findings

Spatial Policies

- 13.4.1 Spatial policies perform varyingly in terms of this SA objective. CSSP1: Strategic Housing Provision and Locations, CSSP2: Sustainable Employment Growth and CSSP4: Sustainable Green Belt perform well in terms of preserving the existing landscape and using previously developed land. CSSP4 and CSSP5: Sustainable Greengrid, have a particular focus on enhancing biodiversity in, and increasing access to the public realm, which are likely to contribute to enhancing the landscape.
- 13.4.2 The same policies, inevitably, can potentially have a negative impact on this SA objective in terms of landscape and related biodiversity, as they support high levels of development.
- 13.4.3 The effect of these policies on local distinctiveness and heritage character is uncertain at this point, as this may be determined by the design and phasing of individual developments or clusters.

²⁷ Thurrock Council (2006). *Infrastructure Deficit Study 2004-2021*.

Thematic Policies

- 13.4.4 While the majority of thematic housing policies (CSTP1 – CSTP5) are not likely to have an impact on this SA objective, the impacts of CSTP1: Strategic Housing on landscape and townscape are as yet uncertain. CSTP3: Gypsies and Travellers is likely to impact positively on this SA objective, as it sets out restrictions for new and extended pitches in terms of character and appearance.²⁸
- 13.4.5 The Employment policy CSTP8: Viability and vitality of Existing Centres is likely to be beneficial to this SA objective in terms of preserving and enhancing local distinctiveness and heritage character. The remaining Employment policies (CSTP6, 7 and 9) are unlikely to have any significant impact.
- 13.4.6 The Environment policies (CSTP18-24) are largely beneficial to this SA objective, with the exception of CSTP21: Productive land, which is unlikely to have any significant impact. These policies are key in terms of mitigating the impacts of proposed development in Thurrock, particularly in context of cultural heritage and landscape. The supporting text for Policies CSTP22: Thurrock Design, CSTP23: Thurrock Character and Distinctiveness and CSTP24: Heritage Assets and the Historic Environment explicitly states that the objectives of these policies are aligned with this SA objective. CSTP18: Green Infrastructure and CSTP19: Biodiversity may potentially have a positive impact in terms of preserving and enhancing landscape assets.
- 13.4.7 The impacts of the Waste and Minerals Policies (CSTP29 and CSTP31) have been marked as uncertain. This is because, while Policy CSTP29: Waste Strategy, promotes a strategic approach to site selection which should minimise impact on landscape character, local distinctiveness and historic built heritage from the location of waste management sites, these issues are not explicitly mentioned. Similarly although CSTP31: Provision of Minerals sets out restrictions on permitting mineral extraction and also promotes good environmental practice, additional allocation of land and the 'Preferred Areas' for mineral extraction may have negative impacts on the existing biodiversity, landscape, local distinctiveness and historic value of those areas. However, whether this will translate in to a negative impact, or on balance will have a positive impact (e.g. restoration of sites to previous or enhanced state), will depend upon criteria and policies outlined in the Minerals and Waste Development Plan Document (MWDPD).
- 13.4.8 Thematic socially inclusive communities policies (CSTP9 – 13), transport and access (CSTP14 – 17), climate change policies (CSTP25 – 26) and the infrastructure policy (CSTP33) are unlikely to have any significant impact on this SA objective.

²⁸ Note that policies CSTP3 (Gypsies and Travellers) and CSTP4 (Travelling Showpeople) have now been amended through a 'Post Submission Focused Change' to the Core Strategy. The revised policies have been subject to Sustainability Appraisal, and findings set out within an SA Report Addendum. The Post Submission Focused Change document and SA Report Addendum are available on the Council's website.

Policies for the Management of Development

- 13.4.9 The majority of Policies for the Management of Development are unlikely to have any significant impact on this SA objective.
- 13.4.10 Policies PMD2 – 6 are likely to be beneficial. PMD4: Historic Environment in particular has been marked as having a significant positive benefit as its objective is clearly aligned with the SA objective. PMD2: Design and Layout explicitly encourages design thinking in terms of character, landscape and utilities, while PMD3: Tall Buildings emphasises sensitivity to heritage assets and historic character. PMD5: Open Spaces, Outdoor Sports and Recreational Facilities and PMD6: Development in the Green Belt may potentially encourage a greater quantum and better quality of outdoor spaces and facilities, while restricting development on existing Green Belt land.

13.5 Recommendations for mitigation and/or enhancement

- 13.5.1 Potential negative impacts of policies around sustainable housing, employment and infrastructure on landscape and biodiversity should be mitigated through robust public realm strategies, while developer contributions to landscape and character studies and works should be encouraged.
- 13.5.2 This level of growth will need to be managed (in accordance with other relevant policies included in the DPD) and also phased adequately to reduce any negative impacts on local distinctiveness and heritage character.
- 13.5.3 Policy CSTP19: Biodiversity and its supporting text could be improved by linking biodiversity and associated habitats and landscape character and distinctiveness in the supporting text.

13.6 Monitoring

- 13.6.1 To monitor the impacts of the DPD on this sustainability theme, monitoring of the following indicators should be undertaken:
- Participation in culture – use of public libraries
 - Number of tickets sold for arts and heritage events
 - Number of residents involved in the management of open space
 - Number of parks achieving green flag status
 - Number of planning applications refused on landscape grounds

14 Appraisal findings: Water

14.1 Introduction

14.1.1 This section discusses the appraisal of the Core Strategy and Policies for the Management of Development DPD against the SA objective and sub-objectives from SA objectives 7 and 10 that relate to water:

- Ensure that water consumption and water sources can accommodate future development (SO 9)
- Maintain 'good' water quality whilst accommodating new development discharge (sub-objective from SO 7)
- Reduce water use, maintain water security despite climate change (sub-objective from SO 10)
- Limit water consumption to levels supportable by natural processes and storage systems, taking into account the impacts of climate change (sub-objective from SO 10)
- Maintain water environment whilst meeting demand from development (sub-objective from SO 10)

14.1.2 This section also sets out the sustainability context, recommendations for mitigation and/or enhancement and monitoring that relate to the water theme.

14.2 Background

14.2.1 In the UK, access to clean water is generally taken for granted, yet large quantities are used for domestic purposes, for cooling, rinsing and cleaning in industry, and for irrigation in agriculture. Such activities place a heavy burden on water resources in terms of both quality and quantity. Water resources include precipitation, surface water (lakes, rivers, etc.), soil (near-surface) water and groundwater. Water resources are valued in a number of different ways, for example:

- Surface waters and adjacent land often have high landscape and recreational value;
- Navigable waters have economic importance; and
- River flood plains often contain valuable agricultural land owing to replenishment of sediments during flooding, and have long been a focus for settlement, resulting in them often containing important archaeological features, and being extensively urbanised.

14.2.2 Some of the key environmental problems affecting the quality of local water resources include diffuse pollution, floodplain development pressures, low flows and human health issues. The Council should therefore aim to maintain and improve the quality of surface and groundwater, secure the long-term availability and use of water resources, and reduce the risk and the likelihood of flooding.

14.3 Updated sustainability baseline and key sustainability issues

Updated sustainability baseline

14.3.1 The summary of the baseline for Thurrock in relation to this theme are as follows:

- There is little or no water available from existing sources within Thurrock and therefore future development will be served by water supplied from the increase in storage at Abberton Reservoir which is due to be completed in 2014²⁹
- Therefore, phasing of development up to 2014 will have to be carefully considered and potentially minimised³⁰
- Water quality within the lower stretches of the River Mardyke which flows through Thurrock urban area is currently of moderate to poor quality and fails to meet 'good ecological status' under the WFD³¹
- Poorly managed surface water runoff from development areas bordering the River Mardyke and the should be mitigated to ensure there is no deterioration in the existing water quality³²

Key sustainability issues

14.3.2 The key sustainability issues identified under Water for Thurrock are as follows:

- Natural resources, including water, should be used efficiently;
- A reduction in per capita water use should be achieved through water efficient development and work with partners to reduce consumption;
- Sufficient water for all uses (including natural, e.g. marshes, rivers, etc) should be maintained;
- Sustainable urban drainage systems and management of surface water runoff should be promoted as part of all developments; and
- New and existing development should not lead to an increase in pollution of water bodies.

14.4 Appraisal findings

Spatial Policies

14.4.1 The impacts of the Housing and Employment spatial policies (CSSP1 and 2) on the SA objective and sub-objectives that cover water resources is uncertain. The potential impact on water resources will be determined by the phasing of the proposed development. The draft Water Cycle Study for Thurrock found that there is little or no extra water available from existing sources to supply new development. Increased storage at the Abberton Reservoir (due to be completed in 2014) will be needed to ensure supply to new development. Therefore, the study recommends phasing of development up to 2014 and this will need to be carefully considered.

²⁹ Thurrock Council (2009). *Water Cycle Study* [draft].

³⁰ Ibid.

³¹ Ibid.

³² Ibid.

- 14.4.2 Water quality is covered by a sub-objective of SA objective 7 (reducing pollution). The impacts of the employment and infrastructure development set out in policies CSSP2 and 3 may result in negative impacts on water quality which will need to be minimised.
- 14.4.3 Policy CSSP5 Sustainable Greengrid is likely to result in positive impacts on both water quality and quantity.

Thematic Policies

- 14.4.4 As with the spatial policies, the impacts on water quality and quantity are likely to result from the increase in development which will lead to additional pressure on resources and quality. There are also uncertainties in relation to policy CSTP21: Productive land which mentions sustainable water use and environmental quality in relation to agricultural and other forms of productive land (e.g. allotments). Although it is not very likely, this policy could lead to some impacts on water resources and pollution associated with an increase in agriculture and related activities.
- 14.4.5 In addition, the impacts of policy CSTP31: Provision of minerals against water quality and quantity are uncertain. Mineral extraction can involve use of large quantities of water and can also potentially lead to pollution. However, these impacts could be avoided through the inclusion of appropriate criteria and policies in the Minerals and Waste Development Plan Document (MWDPD).
- 14.4.6 The thematic environmental and climate change policies will have positive impacts on water quality and quantity and will contribute to mitigate any negative impacts arising from a growth in development and jobs.

Policies for the Management of Development

- 14.4.7 These policies are likely to have positive or neutral impacts on water resources and water quality. The implementation of some of these policies is also likely to mitigate negative impacts arising from increased development in Thurrock. For instance, PDM2: Design and Layout refers to including SUDs as part of development which should have a positive impact on this sustainability theme.

14.5 Recommendations for mitigation and/or enhancement

- 14.5.1 As mentioned above, ensuring that the phasing of development is in tune with the development of additional water resources. The impacts of new development should also be reduced through measures to avoid pollution of water courses (e.g. SUDs). Where possible, improvements to the water environment should be sought as part of new development.

14.6 Monitoring

- 14.6.1 To monitor the impacts of the DPD on this sustainability theme, monitoring of the following indicators should be undertaken:
- Availability of water resources within Thurrock
 - Water quality in line with the Water Framework Directive requirements

15 Appraisal findings: Climate change

15.1 Introduction

15.1.1 This section discusses the appraisal of the Core Strategy and Policies for the Management of Development DPD against the SA objective and sub-objective that relates to climate change:

- To reduce consumption of non-renewable energy sources and to use the available natural resources in the most efficient and sustainable manner (SO 10)
- Protect and enhance habitats and wildlife taking account of climate change (sub-objective from SO 6)

15.1.2 This section also sets out the sustainability context, recommendations for mitigation and/or enhancement and monitoring that relate to the climate change theme.

15.2 Background

15.2.1 The United Nations Framework Convention on Climate Change (UNFCCC) defines climate change as:

“a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods”³³.

15.2.2 Mitigation and adaptation are the dual challenges that need to be addressed by the planning system³⁴.

15.2.3 Mitigation involves measures that will reduce the impact of human activity on the climate system and these primarily relate to reducing greenhouse gas (GHG) emissions. For Thurrock’s LDF this may relate to:

- Energy efficiency and strengthening of building regulations standards
- Sustainable design
- Renewable and low carbon energy generation³⁵
- Minimising GHG emissions through intelligent spatial planning

15.2.4 Adaptation on the other hand means responding to the impacts of climate change. Adjustments to natural or human systems must be made in order to ensure that actual or expected climatic stimuli will maximise benefits and minimise costs³⁶. For Thurrock’s LDF adaptation may be considered with respect to:

³³ UNFCCC (no date). *IPCC Glossary* [online] available at: <http://www.ipcc.ch/pdf/glossary/ipcc-glossary.pdf> (accessed 19 January 2010).

³⁴ Homes and Communities Academy (no date). *What is mitigation/adaptation?* [online] available at: <http://www.hcaacademy.co.uk/node/385> (accessed 21 January 2010).

³⁵ South East England Partnership Board (2009). *Climate change within Local Development Frameworks* [online] available at: http://www.southeast-ra.gov.uk/documents/regional_planning/ldf/climate_change/Climate_Change_LDFguide_Main_Content.pdf (accessed 21 January 2010).

³⁶ Homes and Communities Academy (no date). *What is mitigation/adaptation?* [online] available at: <http://www.hcaacademy.co.uk/node/385> (accessed 21 January 2010).

- Water management (including water supply/demand and water quality)
- Resilience of the built environment and infrastructure (including resilience against flooding, heat, storms and erosion)
- Management of the natural environment and biodiversity³⁷

15.3 Updated sustainability baseline and key sustainability issues

Updated sustainability baseline

15.3.1 The summary of the baseline for Thurrock in relation to this theme are as follows:

- There was no renewable energy capacity installed in Thurrock during 2007/08³⁸.
- The Council has exceeded its target for the energy rating of local authority dwellings. The SAP rating was 78.5 in 2007/08³⁹.
- Per capita CO₂ emissions were 12.1 tonnes in 2006, a slight reduction from 2005 (12.8) tonnes. This figure is one of the highest of all local authorities in the East of England and considerably higher than the regional figure (8.1 tonnes)⁴⁰.
- The per capita figure is a reflection of the industrial nature of the Borough. Percentage CO₂ emissions by sector are: Industry 50%, Domestic 18% and Transport 22%⁴¹.
- Flood risk is a major issue for Thurrock. Some of the key areas identified for major development and regeneration (e.g. Tilbury, Thames Gateway) are partly located in Flood Zone 3 (highest risk).

Key sustainability issues

15.3.2 The key sustainability issues identified under Climate Change for Thurrock are as follows:

- All homes from 2016, and all new public sector by 2018 and all new commercial buildings by 2019, should be built to zero carbon standards;
- Decentralised and renewable or low-carbon sources should be promoted as part of new development;
- A significant increase in the amount of energy generated from renewable sources should be sought;
- The impact of climate change on flood risk should be taken into account in new development; and
- Dependence on private car should be reduced.

³⁷ South East England Partnership Board (2009). *Climate change within Local Development Frameworks* [online] available at: http://www.southeast-ra.gov.uk/documents/regional_planning/ldf/climate_change/Climate_Change_LDFguide_Main_Content.pdf (accessed 21 January 2010).

³⁸ Thurrock Council (2008) Annual Monitoring Report 2008 [online] available at: http://www.thurrock.gov.uk/planning/strategic/pdf/monitor_annual_2008.pdf (accessed: 21 January 2010)

³⁹ Thurrock Council (2008) Annual Monitoring Report 2008 [online] available at: http://www.thurrock.gov.uk/planning/strategic/pdf/monitor_annual_2008.pdf (accessed: 21 January 2010)

⁴⁰ East of England Regional Economic Atlas: District & Unitary Indicators [online] available: http://www.insighteast.org.uk/WebDocuments/approved/FTPUploads/RES/RESIndicators_SingleMap_District/atlas.html (accessed: 21 January 2010)

⁴¹ Defra e-Digest Statistics about: Climate Change. Emissions of carbon dioxide for local authority areas [online] available at: <http://www.defra.gov.uk/environment/statistics/globalatmos/galocalghg.htm> (accessed: 21 January 2010)

15.4 Appraisal findings

Spatial Policies

- 15.4.1 Spatial policies may lead to significant effects against the main climate change-related SA objective (10) and the sub-objective of SA 6 (to protect and enhance Thurrock's biodiversity and geodiversity, including all designated sites) which focuses on protecting and enhancing habitats and wildlife taking account of climate change.
- 15.4.2 The high levels of growth provided by the DPD for Thurrock will inevitably increase overall levels of consumption of non-renewable resources and will also lead to additional pressure on habitats and wildlife. However, the negative impacts on habitats and wildlife may be mitigated by CSSP5: Sustainable Greengrid which promotes a strategic approach to providing and enhancing greens spaces and infrastructure. This is an important measure for facilitating adaptation of biodiversity and habitats to climate change.

Thematic Policies

- 15.4.3 The majority of Thematic Policies are likely to lead to positive or neutral impacts against the SA objective relating to climate change (SA objective 10).
- 15.4.4 An exception relates to the impacts of housing and employment growth across the Borough over the plan period. The high levels of growth set by the DPD will inevitably lead to increasing the overall consumption of non-renewable energy sources and natural resources. However, these negative impacts are likely to be reduced through other DPD policies designed to increase energy efficiency whilst promoting renewable energy production and consumption.
- 15.4.5 There some uncertainty with respect to the effects of the implementation of CSPT21: Productive Land with regards to how the Council will take the importance and quality of agricultural land into account when considering land allocation for climate change adaptation/mitigation activities such as the provision new fresh and salt water habitat.

Policies for the Management of Development

- 15.4.6 Policies for the Management of Development which have relevance to the climate change objectives are likely to lead to either positive benefit of significant positive benefits. Significant positive benefits are as a result of the policy requirements for decentralised renewable and low carbon energy generation. These should help to reduce reliance on fossil fuels as the primary energy source and potentially improving Thurrock's sensitivity to external shocks such as oil price rises. However, the local economy is currently highly dependent on fossil fuels so any improvements must be considered within this context.

15.5 Recommendations for mitigation and/or enhancement

- 15.5.1 It is not possible for the DPD to provide for fewer dwellings and levels of employment than have been set by the East of England Plan, therefore, mitigation measures must focus on minimising rather than removing the negative effects against SA objective 10 (climate change). These have already been considered by the Council and included in the DPD and these measures are highlighted by the largely positive benefits forecasted to emerge through the DPD policies.

15.6 Monitoring

- 15.6.1 To monitor the impacts of the DPD on this sustainability theme, monitoring of the following indicators should be undertaken:
- Percentage of new developments achieving BREEAM very good or excellent or Code for Sustainable Homes Levels 3 to 6
 - Renewable energy generation
 - Adapting to climate change
 - Reduction in CO2 emissions by sector (domestic, transport, industry)

16 Appraisal findings: Population and Social Equity

16.1 Introduction

16.1.1 This section discusses the appraisal of the Core Strategy and Policies for the Management of Development DPD against the SA objective that relates to population and social equity:

- To achieve a more equitable sharing of the benefits of prosperity across all sectors of society (SO 11)

16.1.2 This section also sets out the sustainability context, recommendations for mitigation and/or enhancement and monitoring that relate to the population and social equity theme.

16.2 Background

Population

16.2.1 The 'population' is considered to be those inhabiting and working within an area. Population can cover a wide variety of issues but is generally concerned with demographics, for example, size/ age/ density/ diversity/ ethnicity of population, population trends, birth/ death rates, unemployment, income, deprivation, quality of life, household statistics, perception of their environment, access to services/ facilities/ transport/ recreational opportunities.

Social Equity

16.2.2 Concepts of Sustainable Communities have developed markedly over the last two decades from an emphasis on physical redevelopment to a holistic understanding which has emphasised the organic nature of communities and the strong inter-relationships between the key elements of the built environment, the social and cultural fabric of communities, their governance, equity, services, economy and connectivity.

16.2.3 Communities across the UK are increasingly diverse in make-up in terms of the variety of racial, cultural and religious identities. There is also an emphasis on recognizing other forms of diversity within communities, including age, gender, sexuality, disability. Where a particular group or section of community suffers disadvantage, these can give rise to social inequities.

16.2.4 A key challenge in creating a sustainable community is therefore to ensure that all groups and individuals have equal access to opportunities and services, and that the benefits of development are distributed equally among various groups that make up a community. Similarly, to ensure that environmental dis-benefits, if any, do not burden one section of the community disproportionately as compared to others.

16.3 Updated sustainability baseline and key sustainability issues

Updated sustainability baseline

16.3.1 Key issues drawn from the baseline are as follows:

- In mid-2007 there were 150,000 people residing in Thurrock, of whom 73,100 (48.7%) were male and 76,900 (51.3%) were female⁴².
- The population of Thurrock rose by 6,700 between 2001 and 2007⁴³. Current projections are that by 2021, population in Thurrock will be 170,900 or a 14.8% increase from 2006 levels⁴⁴.
- Thurrock has a high birth rate and a decreasing death rate which give the Borough the second highest level of natural population change in the Region. Natural change is the biggest driver of population increase in Thurrock⁴⁵.
- Thurrock's population is ageing following the national and regional trend. By 2021 is predicted that 50% of the population in the region will be over 50. There is also a correlation between the over 50s and disability, in that statistically this group is more likely to become disabled.
- At present, the over 50s are also underrepresented in the labour market. This fact added to the predicted population growth highlights the need for employment policy that addresses the needs of this age group.
- An ageing population will also have implications for the type of housing required. This includes 'homes for life' which are designed to cater for people's changing needs through different life stages, as well as, particularly for very old people, sheltered accommodation.
- Older people are at particular risk of social isolation. A contributing factor is low car ownership for some groups (e.g. single people of pension age in rural areas). Transport related policies will need to address this issue.
- Young people, between 16 and 24 are another potentially disadvantaged group. For instance, in terms of access to employment, they have been one of the worst affected groups in the current recession.
- Thurrock has become relatively less deprived, falling 9 places from 122 in 2004 to 131 in 2007. However, Thurrock is still in the 20-40% most deprived areas. Thurrock ranks high in both income and employment deprivation and there are also significant pockets of health deprivation⁴⁶.
- 14.9% of Thurrock's population were claiming benefits in February 2009. This figure is higher than the East of England percentage, 12.5 but lower than the national figure of 15.7%.

⁴² Thurrock Council (2008) Annual Monitoring Report 2008 [online] available at: http://www.thurrock.gov.uk/planning/strategic/pdf/monitor_annual_2008.pdf (accessed: 21 January 2010)

⁴³ Thurrock Council (2008) Annual Monitoring Report 2008 [online] available at: http://www.thurrock.gov.uk/planning/strategic/pdf/monitor_annual_2008.pdf (accessed: 21 January 2010)

⁴⁴ Insight East (2009) Thurrock Economic Profile, July 2009 [online] available at: <http://insighteast.org.uk/viewResource.aspx?id=17226> (accessed: 21 January 2010)

⁴⁵ Insight East (2009) Thurrock Economic Profile, July 2009 [online] available at: <http://insighteast.org.uk/viewResource.aspx?id=17226> (accessed: 18 January 2010)

⁴⁶ Insight East (2009) Thurrock Economic Profile, July 2009 [online] available at: <http://insighteast.org.uk/viewResource.aspx?id=17226> (accessed: 18 January 2010)

Key sustainability issues

- 16.3.2 The key sustainability issues identified under Population and Social Equity for Thurrock are as follows:
- An increase in the supply of affordable housing and a better mix of dwelling sizes, tenure and types should be sought;
 - Additional accommodation for Gypsies and Travellers and Travelling Showpeople should be provided based in need;
 - Pockets of deprivation need to be addressed;
 - Ensure adequate access to services and facilities for all current and future residents;
 - Contribute greater equality of opportunity for all citizens, with the desired outcome of achieving a fairer society;
 - Promote participation of all community groups, including disabled people, in sport at the highest levels; and
 - To invest in skills of all sectors of society but particularly those currently not well represented in employment including the over 50s and the young.

16.4 Appraisal findings

Spatial Policies

- 16.4.1 These policies are likely to have positive impacts on the relevant SA Objective. These policies should contribute to providing housing for those in need in the borough. They should also increase the availability of jobs. CSSP5 – Sustainable Green Grid is also likely to impact this SA objective positively, through the emphasis on improving access to and use of open space, including green space, educational provision, leisure and sports facilities.

Thematic Policies

- 16.4.2 Policies on Housing, Employment and Socially Inclusive Communities are likely to have positive impacts on this SA objective. In particular, housing policies relating to providing housing to all and fair and equitable access to services focusing on deprived areas.
- 16.4.3 CSTP1: Strategic housing provision sets out policy areas contained within Thurrock's Housing Strategy, of which an estate / neighbourhood based approach to regeneration is likely to have a positive impact. The focus on young people and older people, among other vulnerable groups is also likely to be beneficial, especially given the baseline conditions of these population groups, where these groups face increased unemployment, and in case of older people, increased social isolation. CSTP2 focuses on providing Affordable Housing and as such is seen as a positive contributor to the aims of this SA objective.

- 16.4.4 Two options for the Gypsies and Travellers policy (CSTP3) were included in the Submission version of the Core Strategy with the impact of the policy uncertain. However, if as discussed under the Housing theme (Section 18) no additional pitches were to be provided, the impacts of the policy were likely to be negative as they would not be addressing the housing needs of the Gypsies and Travellers in the Borough.⁴⁷
- 16.4.5 Policies CSTP3 (Gypsies and Travellers) and CSTP4 (Travelling Showpeople) have now been amended through a 'Post Submission Focused Change' to the Core Strategy. The revised policies have been subject to Sustainability Appraisal, and findings set out within an SA Report Addendum. The Post Submission Focused Change document and SA Report Addendum are available on the Council's website. Originally the Submission version had two options, but the post submission focused change now aligns with the RSS and provides pitches, so the impact (in SEA/SA terms) is more favourable.
- 16.4.6 CSTP9: Well being, leisure and sports focuses on providing new leisure and sports facilities, safeguarding existing ones as well as opening up existing spaces and resources to more people. CSTP10 is centred on community facilities, including cultural provision. CSTP12: Education and Learning emphasises the integration of educational provision with community structures. All of these policies should have positive impacts on this SA objective.
- 16.4.7 The Transport policies (CSTP14 – CSTP15) are likely to have a positive impact on this SA objective. CSTP14 sets out the delivery of a network of core walking and cycling routes and improved public transport infrastructure is likely to improve access to services and facilities for all. The Policy explicitly states that regeneration areas will be a focus for transport network improvements. Transport improvements will also support regeneration objectives within the New Lakeside Regional Centre. CSTP15 states that transport network improvements will be made in growth or regeneration areas where new accesses are required.
- 16.4.8 The majority of environment policies are benign to this SA objective, with the exception of CSTP23: Thurrock Character and Distinctiveness, which is unlikely to have any significant impact. The majority of Climate Change, Water and Waste policies are also unlikely to have any significant impact. CSTP28: River Thames is an exception, wherein recreational access to the river and the riverside environment is emphasised. This policy is likely to have a positive impact on this SA objective.

Policies for the Management of Development

- 16.4.9 The majority of Policies for the Management of Development are unlikely to have any significant impact on this SA objective.
- 16.4.10 PMD5: Open Spaces, Outdoor Sports and Recreational Facilities is an exception with its bent towards social inclusion and community cohesion through the provision of outdoor spaces and facilities for all community groups. PMD6: development in the Green belt and PMD16: Developer Contributions are also seen as beneficial to this SA objective, particularly in their focus on the most deprived areas.

⁴⁷ Note that policies CSTP3 (Gypsies and Travellers) and CSTP4 (Travelling Showpeople) have now been amended through a 'Post Submission Focused Change' to the Core Strategy. The revised policies have been subject to Sustainability Appraisal, and findings set out within an SA Report Addendum. The Post Submission Focused Change document and SA Report Addendum are available on the Council's website. Originally the Submission version had two options, but the post submission focused change now aligns with the RSS and provides pitches, so the impact (in SEA/SA terms) is more favourable.

16.5 Recommendations for mitigation and/or enhancement

- 16.5.1 While spatial, thematic and management of development policies seem to promise increased access to open space to the population of Thurrock, it will be important to avoid the privatisation of public spaces by any one group. These could be residents, commercial interests or others, who may exert their right over these spaces by fencing them off, or being too selective about users through management and control measures.
- 16.5.2 It will be essential to ensure that new development is designed and built with all equality groups in mind, including disabled and elderly residents, women and ethnic minorities and the very young. It will also be key that new employment provision is targeted at those groups that are less well represented in the employment market within Thurrock including the young and the over 50s. The needs of gypsies and travellers in the borough should also be taken into account.

16.6 Monitoring

- 16.6.1 To monitor the impacts of the DPD on this sustainability theme, monitoring of the following indicators should be undertaken:
- People receiving income based benefits living in homes with a low energy efficiency rating
 - Number of people of working age claiming benefits
 - Deprivation levels in Thurrock

17 Appraisal findings: Access to Services

17.1 Introduction

17.1.1 This section discusses the appraisal of the Core Strategy and Policies for the Management of Development DPD against the SA objective that relates to access to services:

- Ensure fairer access to services, focusing on the most deprived areas (SO 12)

17.1.2 This section also sets out the sustainability context, recommendations for mitigation and/or enhancement and monitoring that relate to the access to services theme.

17.2 Background

17.2.1 Access to services involves being able to use education, healthcare and community facilities and open space. In addition, access to services also includes having access to an adequate transport infrastructure in order to enable access to services. Access to services is therefore a key component of sustainable development and should be examined when the impacts of a plan or programme on working towards sustainable development are being assessed.

17.3 Updated sustainability baseline and key sustainability issues

Updated sustainability baseline

17.3.1 Key issues drawn from the baseline are as follows:

- High numbers of HGV's and high traffic flows on strategic roads are adversely impacting on local air quality, CO2 emissions, and congestion⁴⁸.
- There is generally good accessibility by public transport and walking to many services, but poor access to further education and hospitals could exacerbate low skills and health issues, the latter being a particular concern with the ageing population.
- Many of the new jobs will be at London Gateway, which is away from the main urban areas and so less accessible for employment access by non-car means, which may limit opportunities for many social groups and fail to deliver equality of opportunity
- There are very low levels of walking and cycling which could fuel increasing obesity and so it will be necessary to learn from the success of recent School Travel Plans in increasing walking and cycling
- Bus passenger journeys originating in Thurrock in 2007/08 fell to 3.08 million compared with 3.26 m in the previous year⁴⁹.
- In 2007/08, 59% of residents were satisfied with parks and open spaces in the Borough⁵⁰. This was considered a low score⁵¹.

⁴⁸ Thurrock Council (2008) Thurrock Transport Strategy [online] available at: http://www.thurrock.gov.uk/travel/pdf/lts_200807.pdf (accessed 18 January 2010)

⁴⁹ Thurrock Council (2008) Annual Monitoring Report 2008 [online] available at: http://www.thurrock.gov.uk/planning/strategic/pdf/monitor_annual_2008.pdf (accessed: 21 January 2010)

⁵⁰ Thurrock Council (2008) Annual Monitoring Report 2008 [online] available at: http://www.thurrock.gov.uk/planning/strategic/pdf/monitor_annual_2008.pdf (accessed: 21 January 2010)

- In 2008, Thurrock scored highly in terms of public library services including access and ICT provision⁵².
- An average score was obtained for the percentage of total footpaths and other rights of way easy to use by the public, resident satisfaction with sport/ leisure facilities, libraries, museums/galleries, theatre / concert halls. Other average scores included the percentage of population that are within 20 minutes travel of sports facilities⁵³.

Key sustainability issues

17.3.2 The key sustainability issues identified under Access to Services for Thurrock are as follows:

- The need to improve access and quality of open spaces particularly in areas of deficit;
- The transport system should be improved so that is fully inclusive, accessible for everyone, safe and attractive to use;
- The need to increase the quantity of facilities and services particularly community centres in the borough and address the problem of poor access to the existing centres; and
- The current poor provision of public transport should be improved and an increase pedestrian and cycle accessibility should be promoted.

17.4 Appraisal findings

Spatial Policies

- 17.4.1 All the spatial policies are essential in improving access to services for all and are therefore likely to result in positive impacts against this sustainability theme.
- 17.4.2 Policies CSSP1 and CSSP2 should concentrate (respectively) housing and employment growth in areas well served by public transport, thus enhancing accessibility, and should increase the range of services available. Policy CSSP3 provides both social and physical infrastructure including transport, social community infrastructure and emergency services and utilities; and therefore is central to improving access for all, particularly given that the Thurrock baseline identifies poor access to further education and hospitals.
- 17.4.3 Policy CSSP5 – Sustainable Greengrid outlines a number of services provided, and should promote access through green infrastructure and thus should also help to improve both accessibility and also to overcome low levels of walking and cycling.
- 17.4.4 In addition to restricting development in the green belt, Policy CSSP4 also promotes positive uses such as educational provision, leisure and sports, and aims to increase public access in the green belt.

⁵¹ Audit Commission (2009) Comprehensive Area Assessment, Culture Service Assessment for Thurrock [online] available: <http://cpa.audit-commission.gov.uk/STCCCulture.aspx?msc=s&taxID=108448&aibID=10000047&lsvt=False&aibName=Thurrock%20Council&faibID=0#r> (accessed: 18 January 2010)

⁵² Audit Commission (2009) Comprehensive Area Assessment, Culture Service Assessment for Thurrock [online] available: <http://cpa.audit-commission.gov.uk/STCCCulture.aspx?msc=s&taxID=108448&aibID=10000047&lsvt=False&aibName=Thurrock%20Council&faibID=0#r> (accessed: 18 January 2010)

⁵³ Audit Commission (2009) Comprehensive Area Assessment, Culture Service Assessment for Thurrock [online] available: <http://cpa.audit-commission.gov.uk/STCCCulture.aspx?msc=s&taxID=108448&aibID=10000047&lsvt=False&aibName=Thurrock%20Council&faibID=0#r> (accessed: 18 January 2010)

Thematic Policies

- 17.4.5 The thematic policies have only a positive or no impact on this theme. Key groups of policies that are affected are discussed below.
- 17.4.6 All the Housing policies (CSTP1 to 5) are expected to have some positive benefit by ensuring provision, particularly in the most deprived areas and for those most in need, of an adequate quantity and mix of houses, of sites for gypsies and travellers and travelling showpeople, and of services within residential areas through neighbourhood renewal. However, adequate phasing of development will be needed to ensure that the necessary social and physical infrastructure are in place.
- 17.4.7 The Employment (CSTP6 to 8) policies similarly also perform well against the relevant SA objective. These policies should result in increased access to a range of jobs and business services for all. Maintaining the vitality and viability of existing centres (Policy CSTP8) will also enhance their accessibility to both residents and visitors to the borough. It will be important to provide access to adequate skills and training to maximise the benefits of this policy.
- 17.4.8 The Socially Inclusive Communities are all expected to have some positive benefit against this theme, by increasing the availability and accessibility of leisure and sports facilities (CSTP9), community facilities (CSTP10), health provision (CSTP11), education and learning (CCTP12) and emergency services and utilities (CSTP13). These will be particularly important in addressing concerns for Thurrock regarding access to further education and hospitals and resident satisfaction with sport / leisure facilities (including distance to), libraries, museums/galleries, theatre / concert halls. The Environmental policies (CSTP18 to 24) also provide natural services and improved provision and accessibility (particularly in areas of deficiency and to meet local community needs). Policy CSTP28 opens up accessibility to the River Thames for recreational use, with new development providing new or enhanced sustainable, safe and equitable access to and along the river foreshore, and connecting with the Greengrid.
- 17.4.9 The Transport and Access policies CSTP14 and CSTP15 will be important in ensuring accessibility. Phasing the delivery of CSTP14 will focus on core routes to key services with priority in growth areas, and will encourage a range of transport modes including walking and cycling core routes, which will increase accessibility to more residents. Environmental policies for green infrastructure (CSTP18), open space (CSTP20) also present greater connectivity.

Policies for the Management of Development

- 17.4.10 The majority of the Policies for the Management of Development have no impact against this objective apart from three policies that are anticipated to have some benefit. Two of these policies are Natural Environment policies. PMD5 looks to safeguard open spaces, outdoor sports and recreational facilities and ensure that new development provides these facilities and ensures that they are accessible. PMD6 recognises the role of the Green Belt in providing opportunities for access to the countryside and promoting outdoor sport and recreation, and seeks to safeguard where possible.
- 17.4.11 PMD16 – Developer Contributions is an important policy for this SA objective in order to ensure that new development provides key services and mitigates for any loss. However, this policy does not mention the importance of accessibility for residents and requirements, such as for disabled access, should be further detailed in the SPDs for Layout and Standards, Design and Sustainability, and Developer Contributions.

17.5 Recommendations for mitigation and/or enhancement

- 17.5.1 Delivery of the housing policies and other infrastructure policies will require adequate phasing of development to ensure that both social and physical infrastructure is delivered when it is needed in order to maximise positive impacts. Special access needs, for example for disabled and less physically able persons, are not mentioned within the policies and should not be overlooked. However, policies and criteria set out in the Layout and Standards SPD, the Design and Sustainability SPD and the Developer Contributions SPD should provide further guidance for enhancing accessibility and safeguarding and enhancing services. The transport and access policies should also support accessibility in the housing, employment and socially inclusive communities policies.
- 17.5.2 Although the Productive Land policy (CSTP21) should improve rural access and the services provided in rural areas by supporting rural businesses, it will be important that agricultural land does not reduce accessibility to the natural environment. Appropriate management and selection of agricultural land as described within the policy should assist in this.
- 17.5.3 Policy CSTP23 could emphasise the importance of safeguarding and improving accessibility to key areas as part of enhancing local distinctiveness and character.
- 17.5.4 In order to maximise the benefits of the employment policies, access to skills and training could be provided in addition to new and diversified jobs.

17.6 Monitoring

- 17.6.1 To monitor the impacts of the DPD on this sustainability theme, monitoring of the following indicators should be undertaken:
- Access to primary care – ability to book at GP appointment
 - Access to services and facilities by public transport, walking and cycling
 - Number of primary school children travelling to school by car
 - Working age people with access to employment by public transport, walking and cycling

18 Appraisal findings: Housing

18.1 Introduction

18.1.1 This section discusses the appraisal of the Core Strategy and Policies for the Management of Development DPD against the SA objective that relates to housing:

- To provide housing to all those in the borough in need (SO 13)

18.1.2 This section also sets out the sustainability context, recommendations for mitigation and/or enhancement and monitoring that relate to the housing theme.

18.2 Background

18.2.1 Access to shelter and the need for a home are fundamental human requirements and as such provision of sufficient good quality housing is also a crucial component of a sustainable community. The UK Government believes that everyone should have the opportunity of a decent home, which they can afford. The housing needs of a community vary greatly and different people have different housing demands, which also change over their lifetime. The need to provide a variety of dwelling types, including flats and houses, and sizes, including one, two, three and four bedroom properties is therefore crucial.

18.2.2 In many areas, poorer members of society are not always able to access the housing market due to high house prices. Affordable housing provision whereby housing is subsidised, is therefore a key component of housing provision for a sustainable community. In addition, many public sector workers such as teachers and health-care workers cannot access the housing market. Also, gypsies and travellers have different accommodation needs. Provision of a range of affordable housing/accommodation options is therefore also important.

18.2.3 Ensuring that the housing stock is of adequate standard is important. The UK Government has set a 'decent homes' standard, defining a 'decent home' as a home that is warm, weatherproof and has reasonably modern facilities. New housing must conform to this standard. In many areas however, the housing stock can be decades old and in a poor state of repair. Improving the conditions of these buildings is crucial.

18.3 Updated sustainability baseline and key sustainability issues

Updated sustainability baseline

18.3.1 Key issues drawn from the baseline are as follows:

- House prices in the East of England fell further from the January 2008 peak than nationally, but by the second quarter of 2009 they have been recovering faster. However, house prices in Thurrock have continued to fall and were about 18% lower in July 2009 than at the peak⁵⁴.

⁵⁴ InsightEast (2009) East of England Recession Impact, September 2009 [online] available: http://insighteast.org.uk/WebDocuments/Public/approved/user_9/recessionreportsep2009_1/Recessionreportsep2009.pdf (accessed: 21 January 2010)

- 4,965 dwellings were built in Thurrock between April 2001 and March 2009. 136 dwellings were built in 2008-09.
- The Borough has a target to build 18,500 new dwellings between 2001 and 2021 (East of England Plan). This represents an average of over 900 dwellings per year. The average between 2001 and 2009 was 587 new dwellings. This means that to meet the target, an additional 1050 dwellings will need to be built every year.
- The 2008 South Essex Strategic Housing Market Assessment (SHMA) indicated that 54% of new homes would have to be affordable to meet current housing needs.
- However, the SHMA recognised that this level is not deliverable and suggested a 35% affordable housing target for the sub-region.
- For Thurrock, a minimum split of 70:30 between social rented and intermediate provision was suggested.

Key sustainability issues

18.3.2 The key sustainability issues identified under Housing for Thurrock are as follows:

- The need to use urban areas for housing development where possible – unless addressing particular rural needs;
- The need to ensure that all new residential buildings from 2016 are zero-carbon and that new development secures some of its energy from decentralised and renewable or low-carbon sources where possible;
- The supply of housing and affordable housing should be increased and a better mix of dwelling sizes, tenure and types should be provided; and
- The need to provide additional accommodation for Gypsies and Travelling Showpeople as set out by the single issue review to the East of England Plan.

18.4 Appraisal findings

Spatial Policies

- 18.4.1 The key spatial policy that can have an impact on this SA objective is CSSP1 – Sustainable Housing and Locations. This policy sets out the quantum and location of new housing development in the Borough. To meet national and regional housing targets Thurrock is required to deliver a minimum of 18,500 dwellings between 2001 and 2021 and a further 4750 dwellings to 2026.
- 18.4.2 However, there is uncertainty as to whether the housing growth will benefit those most at need and unable to afford a home. The implementation of Thurrock's affordable housing targets (included in policy CSTP2 – see next section) will be essential, in particular, given that the housing crisis has seriously affected the Borough (prices were down by 18% in July 2009 from the peak). Lower house prices mean lower developer margins and may therefore result in a reduction in the contributions to affordable housing.

Thematic Policies

- 18.4.3 The majority of thematic policies are unlikely to result in significant impacts on this SA objective.
- 18.4.4 The exception is the Housing policies (CSTP1 to CSTP4). CSTP1: Strategic housing provision, sets out the number of new homes that have been allocated for Thurrock in the East of England plan. As discussed under the spatial policy appraisal above, the impact of this policy on this SA objective is uncertain. It will be key that the provision of affordable housing is secured in new developments in order to address the need in the Borough. Thurrock's affordable housing targets are set out in policy CSTP2. The policy also sets out the type of housing tenure (e.g. intermediate) and the mix of dwelling sizes appropriate for the needs of the Borough's population. Achieving this target, 35% of new dwellings to be affordable, plus the right mix of tenures and sizes, should have a significant positive impact on the relevant SA objective.
- 18.4.5 Thurrock's policy covering Travelling Showpeople (CSTP4) is also likely to result in positive impacts on this SA objective. However, the impacts of the policy covering Gypsies and Travellers (CSTP3) are currently uncertain. Thurrock Council has recently challenged a policy included in the East of England Plan (Policy H3) which requires an additional 44 pitches to be provided in Thurrock between 2006 and 2011. The East of England Plan policy H3 states that beyond 2011, provision should be made for an annual 3% compound increase in residential pitches across the region, giving Thurrock a total of 87 additional pitches by 2021.⁵⁵
- 18.4.6 Policies CSTP3 (Gypsies and Travellers) and CSTP4 (Travelling Showpeople) have now been amended through a 'Post Submission Focused Change' to the Core Strategy. The revised policies have been subject to Sustainability Appraisal, and findings set out within an SA Report Addendum. The Post Submission Focused Change document and SA Report Addendum are available on the Council's website. Originally the Submission version had two options, but the post submission focused change now aligns with the RSS and provides pitches, so the impact (in SEA/SA terms) is more favourable.

Policies for the Management of Development

- 18.4.7 These policies would have in general positive or neutral impacts on the housing SA objective.

⁵⁵ Note that policies CSTP3 (Gypsies and Travellers) and CSTP4 (Travelling Showpeople) have now been amended through a 'Post Submission Focused Change' to the Core Strategy. The revised policies have been subject to Sustainability Appraisal, and findings set out within an SA Report Addendum. The Post Submission Focused Change document and SA Report Addendum are available on the Council's website. Originally the Submission version had two options, but the post submission focused change now aligns with the RSS and provides pitches, so the impact (in SEA/SA terms) is more favourable.

18.5 Recommendations for mitigation and/or enhancement

- 18.5.1 The original mitigation recommendation involved the Council reconsidering their position and ensuring that enough new pitches are provided in order to accommodate the needs of the Gypsies and Travellers community. Given that the approach to accommodating Gypsies and Travellers (as set out within Post Submission Further Focused Changes Document) will involve a level of pitch provision that is in line with the RSS allocation, no further mitigation/enhancement is recommended in relation to meeting the needs of gypsies and travellers.
- 18.5.2 In terms of enhancement, the Council should ensure that affordable housing contributions are secured from developers. It will be important to ensure that the affordability target is met (35% of new developments) but also that the provision meets size and tenure needs.

18.6 Monitoring

- 18.6.1 To monitor the impacts of the DPD on this sustainability theme, monitoring of the following indicators should be undertaken:
- Net additional pitches (Gypsy and Traveller)
 - Gross affordable home completions
 - Housing quality – Building for life assessments
 - New developments achieving BREEAM very good or excellent or Code for Sustainable Homes Level 3 to 6
 - Numbers of households on the Council's waiting list

19 Appraisal findings: Crime and Fear of Crime

19.1 Introduction

19.1.1 This section discusses the appraisal of the Core Strategy and Policies for the Management of Development DPD against the SA objective that relates to crime and fear of crime:

- To reduce crime and fear of crime (SO 14)

19.1.2 This section also sets out the sustainability context, recommendations for mitigation and/or enhancement and monitoring that relate to the crime and fear of crime theme.

19.2 Background

19.2.1 Crime and the fear of crime are negative features that effect many communities and can be both causes and effects of socio-economic problems such as unemployment, social and economic inequality, or conflict. Moreover, fear of crime can be just as prevalent or more than the actual incidences of crime and can therefore significantly impact upon members of a community, particularly those that feel vulnerable.

19.3 Updated sustainability baseline and key sustainability issues

Updated sustainability baseline

19.3.1 Key issues drawn from the baseline are as follows:

- Recorded crime rates in Thurrock have continued to fall but are still above the national average⁵⁶.
- Conversely, fear of crime has increased in the last few years⁵⁷.

Key sustainability issues

19.3.2 The key sustainability issue identified under Crime and Fear of Crime for Thurrock are as follows:

- The need to assist in reducing crime, anti social behaviour and the fear of crime.

⁵⁶ Thurrock Council (2008) Annual Monitoring Report 2008 [online] available at: http://www.thurrock.gov.uk/planning/strategic/pdf/monitor_annual_2008.pdf (accessed: 21 January 2010)

⁵⁷ Thurrock Council (2008) Annual Monitoring Report 2008 [online] available at: http://www.thurrock.gov.uk/planning/strategic/pdf/monitor_annual_2008.pdf (accessed: 21 January 2010)

19.4 Appraisal findings

Spatial Policies

- 19.4.1 Spatial Policies had largely neutral effects against this SA objective. However, CSSP5: Sustainable Greengrid was considered likely to lead to positive benefits in reducing crime and fear of crime for the recognition the policy's supportive text gives to the perceived role of the Greengrid as part of a greater commitment towards the creation of safe places for people to gather and enhance community cohesion.

Thematic Policies

- 19.4.2 The majority of the Thematic Policies are likely to lead to no effects against crime and fear of crime.
- 19.4.3 However, several policies have are also likely to lead to some positive benefits. A common thread running through these polices (CSTP6, 8, 9, 10, 12, 20 and 22) and their supportive text is recognition for the role that creating safer places has in developing more cohesive, sustainable communities. These policies are considered to lead to positive benefits in terms of reducing crime and fear of crime through:
- Measures designed to directly reduce crime and fear of crime (e.g. open space design); and
 - Measures leading to outcomes which should reduce crime and fear of crime (e.g. neighbourhood renewal)

Policies for the Management of Development

- 19.4.4 The majority of Policies for the Management of Development will have neutral effects on crime and fear of crime. Some positive benefits are predicted to emerge from PMD2: Design and Layout which ensures through criteria that new development proposals create safe and secure environments. Similarly, PMD8: Parking Standards includes explicit criteria to ensure that parking is only permitted where it is safe and of a high design quality. This is in response to the high levels of vehicle crime experienced within the Borough.

19.5 Recommendations for mitigation and/or enhancement

- 19.5.1 No negative impacts have been predicted by DPD policies against the crime and fear of crime theme. No enhancement recommendations have been identified.

19.6 Monitoring

- 19.6.1 To monitor the impacts of the DPD on this sustainability theme, monitoring of the following indicators should be undertaken:
- Number of reported crime incidents
 - Percentage of residents who feels safe during the day and night

20 Appraisal findings: Human Health

20.1 Introduction

20.1.1 This section discusses the appraisal of the Core Strategy and Policies for the Management of Development DPD against the SA objective that relates to human health:

- To reduce inequalities in health and ensure all current and future residents have access to health facilities (SO 15)

20.1.2 This section also sets out the sustainability context, recommendations for mitigation and/or enhancement and monitoring that relate to the human health theme.

20.2 Background

20.2.1 The World Health Organisation (WHO) define health, in their constitution, as ‘a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity⁵⁸.’

20.2.2 The World Health Organisation (WHO) highlights that the determinants of health include:

- the social and economic environment,
- the physical environment, and
- the person’s individual characteristics and behaviours.

20.2.3 The first two bullet points can be influenced through planning policy. The WHO goes on to list additional factors which include:

- Income and social status - higher income and social status are linked to better health. The greater the gap between the richest and poorest people, the greater the differences in health.
- Education – low education levels are linked with poor health, more stress and lower self-confidence.
- Physical environment – safe water and clean air, healthy workplaces, safe houses, communities and roads all contribute to good health. Employment and working conditions – people in employment are healthier, particularly those who have more control over their working conditions
- Health services - access and use of services that prevent and treat disease influences health

⁵⁸ World Health Organisation (1948). *WHO definition of health* [online] available at: <http://www.who.int/about/definition/en/print.html> (accessed 19 January 2010).

20.3 Updated sustainability baseline and key sustainability issues

Updated sustainability baseline

20.3.1 Key issues drawn from the baseline are as follows:

- Most indicators of healthy lifestyle in adults, except for binge drinking, appear significantly worse in Thurrock than the England average. These include: smoking, healthy eating, physical activity, obesity⁵⁹.
- Road injuries and deaths remain significantly higher than the England average⁶⁰.
- There are health inequalities in Thurrock by location, gender, income and ethnicity. The most deprived wards are Belhus, Tilbury Riverside, Tilbury St.Chad's and Thurrock Park⁶¹.
- Men from the most deprived group die, on average, 6 years early than those in the least deprived group⁶².
- Improving access to health services is one of the factors that can contribute to reducing health inequalities (as identified in Thurrock's Sustainable Communities Strategy). For instance, there is a known shortage of GP's in Grays.

Key sustainability issues

20.3.2 The key sustainability issues identified under Human Health for Thurrock are as follows:

- Thurrock council should work closely with the Primary Care Trust (PCT) to help reduce health inequalities in the borough;
- Road safety should be included as part of any transport improvements;
- Healthy lifestyles should be promoted in the borough and development should contribute by providing contributions to good quality open spaces;
- All aspects of deprivation should be addressed as part of reducing health inequalities in the borough.

⁵⁹ Association of Public Health Observatories (2009) Thurrock Health Profile 2008 [online] available at: http://www.thurrock.gov.uk/I-know/profile/pdf/qf_health_community_2008.pdf (accessed: 18 January 2010)

⁶⁰ Ibid.

⁶¹ Ibid.

⁶² Ibid.

20.4 Appraisal findings

Spatial Policies

- 20.4.1 Taking the wider definition of health included in section 20.1 above, the DPDs spatial policies are likely to result in positive impacts on health and reduce inequalities. The exception is policy CSSP4 Sustainable Greengrid which is not likely to result in any impacts.
- 20.4.2 Access to good quality housing, employment and health facilities are all important factors that can improve health and reduce inequalities and are covered by policies CSSP1 to 3. Providing access to good quality green spaces is also a key factor in reducing health inequalities and increasing well-being. This is covered by policy CSSP5 Sustainable Greengrid.

Thematic Policies

- 20.4.3 Most of the thematic policies are likely to result in positive impacts on this SA objective. In particular, policy CSTP11 directly addresses the provision of health facilities and therefore it is likely to result in significant positive impacts.
- 20.4.4 Policies that cover the provision of other determinants of health such as housing, employment, community facilities, accessibility, sports and recreation, green and open spaces, and education facilities are also likely to result in positive impacts on this SA objective. There was uncertainty in relation to CSTP3: Gypsies and travellers. As discussed in the thematic section on Housing above (section 19), if this policy results in no provision of additional pitches, this could have a detrimental impact on this SA objective, resulting from the lack of provision of adequate housing for these groups.⁶³
- 20.4.5 Policies CSTP3 (Gypsies and Travellers) and CSTP4 (Travelling Showpeople) have now been amended through a 'Post Submission Focused Change' to the Core Strategy. The revised policies have been subject to Sustainability Appraisal, and findings set out within an SA Report Addendum. The Post Submission Focused Change document and SA Report Addendum are available on the Council's website. Originally the Submission version had two options, but the post submission focused change now aligns with the RSS and provides pitches, so the impact (in SEA/SA terms) is more favourable.

Policies for the Management of Development

- 20.4.6 The majority of these policies is not likely to result in significant impacts on health. The exceptions are policies that are likely to result in improved access and quality of open spaces, and sports and recreational facilities. Policies PMD5 and 6 are therefore likely to result in positive impacts. PMD16 Developer contributions is also likely to result in positive impacts on health as it sets out that contributions to health and community facilities will be required from developers.

⁶³ Note that policies CSTP3 (Gypsies and Travellers) and CSTP4 (Travelling Showpeople) have now been amended through a 'Post Submission Focused Change' to the Core Strategy. The revised policies have been subject to Sustainability Appraisal, and findings set out within an SA Report Addendum. The Post Submission Focused Change document and SA Report Addendum are available on the Council's website. Originally the Submission version had two options, but the post submission focused change now aligns with the RSS and provides pitches, so the impact (in SEA/SA terms) is more favourable.

20.5 Recommendations for mitigation and/or enhancement

- 20.5.1 The majority of the DPD policies will have positive impacts on this SA objective so no mitigation measures are proposed.
- 20.5.2 In terms of enhancement and as discussed in the section on Population and Social Equity above, it will be essential to ensure that new development and provision of open spaces and health and community facilities is designed and built with all equality groups in mind, including disabled and elderly residents, women and ethnic minorities and the very young.

20.6 Monitoring

- 20.6.1 To monitor the impacts of the DPD on this sustainability theme, monitoring of the following indicators should be undertaken:
- People killed or seriously injured in road traffic accidents
 - Access to primary care – ability to book at GP appointment
 - Adult participation in sport (including light exercise)
 - All age all cause mortality rates (females / males)
 - Inequalities gap between most/least advantaged quintiles (female and male)
 - Maintaining or improving mortality rates in least disadvantaged quintiles (females and males)

21 Appraisal findings: Soil and Waste

21.1 Introduction

21.1.1 This section discusses the appraisal of the Core Strategy and Policies for the Management of Development DPD against the SA objective that relates to soil and waste:

- To reduce the amount of waste produced and the amount of waste being imported (SO 16)

21.1.2 This section also sets out the sustainability context, recommendations for mitigation and/or enhancement and monitoring that relate to the soil and waste theme.

21.2 Background

21.2.1 Soil is a fundamental and irreplaceable natural resource, providing the essential link between the components that make up our environment. The sustainable management of soils is an important component of sustainable development. The diversity and versatility of England's soils help shape the landscape and inform the land use planning system. Soils provide the platform for built development and protect and contextualise our cultural heritage. They act as a growing medium for our food, timber and other crops. They store vast quantities of water and carbon and they can buffer and transform chemicals that could otherwise cause water or air pollution and/or contaminate our food. Soils also contain an essential component of our biodiversity and support and/or influence all of our ecosystems.

21.2.2 Using land for buildings and transport often damages soils irreversibly, giving rise to conflicting pressures, which are at their most acute in and around towns.

Waste and Landfill

21.2.3 The majority of waste in the UK is sent to landfill. The capacity of existing landfill sites to absorb waste is declining and therefore reducing, reusing, recovering and recycling waste is increasingly important. This follows the waste management hierarchy which is an approach to working towards sustainable waste management. The waste management hierarchy encourages waste to be reduced, reused, recovered, recycled or disposed in descending order of preference.

21.2.4 The impact on soils of minerals extraction should be minimised by ensuring observance of good practice guidance on soil handling issues.

21.3 Updated sustainability baseline and key sustainability issues

Updated sustainability baseline

21.3.1 Key data drawn from the baseline are as follows:

- In 2007/2008 there were 72,701 tonnes of municipal waste arising. This is lower than the 2006/2007 amount but slightly higher than the previous year⁶⁴.

⁶⁴ Thurrock Council (2008) Annual Monitoring Report 2008 [online] available at: http://www.thurrock.gov.uk/planning/strategic/pdf/monitor_annual_2008.pdf (accessed: 21 January 2010)

- 72% of municipal waste was landfilled and nearly 28% recycled or composted, which constitutes an increase from the previous two years⁶⁵ but is lower than the national average of 34%⁶⁶.
- Thurrock contains various types of derelict land including mineral excavations and disused tips, abandoned industrial, service or military installations.
- Thurrock has a long history of mineral extraction, waste disposal, large areas of dockland industry and two large oil refineries large areas of land could be potentially be contaminated.

Key sustainability issues

21.3.2 The key sustainability issues identified under Soil and Waste for Thurrock are as follows:

- Natural resources, including soil, should be used efficiently;
- Development should be directed to brownfield sites within existing urban areas; potential contamination of these sites should be addressed as part of development;
- Per capita waste production should be reduced through increased reduce of resource use followed by reuse and recycling. Where possible, waste should be used as a resource, for instance for energy production ;
- Increase municipal waste recovery to 50% by 2010 and 70% at 2015; and commercial industrial waste recovery to 72% at 2010 and 75% at 2015;
- Pursue use of redundant quarries, sand and gravel pits and landfill sites as new multifunctional green spaces.

21.4 Appraisal findings

Spatial Policies

21.4.1 Only two of the spatial policies are anticipated to have an effect against this SA objective and both may result in adverse effects by increasing waste arisings through population and related housing and employment growth (Policy CSSP1 – Sustainable Housing and Locations and Policy CSSP2 – Sustainable Employment Growth). Businesses and households should be encouraged to minimise waste, reuse and recycle in the thematic policies, and construction waste arisings should be minimised. The spatial policies offer an opportunity to remediate brownfield land and sites that could be contaminated from the borough's long history of mineral extraction, waste disposal, dockland industry and oil refining.

⁶⁵ Ibid.

⁶⁶ Defra (2009) Sustainable development indicators in your pocket 2009 [online] available: http://www.defra.gov.uk/sustainable/government/progress/documents/SDIYP2009_a9.pdf (accessed: 18 January 2010)

Thematic Policies

- 21.4.2 Only a few of the thematic policies are expected to have an effect against this SA objective, with a mixture of adverse, uncertain and beneficial effects.
- 21.4.3 The housing provision (CSTP1) policy and employment policies CSTP6 and CSTP7 are expected to have a negative effect due to increased waste arising as outlined in the spatial policies. Mitigation will be particularly important given that the percentage of waste recycled in Thurrock is currently below the national percentage. In addition to incorporating development-scale and building-scale design features to minimise waste (e.g. waste handling, community heating with energy from waste), behavioural change will also be an important factor in increasing the borough's success with waste management. Furthermore, waste from construction arisings should be given thought and the potential to incorporate best construction practise. CSTP6 – Strategic Employment Provision advocates positive encouragement in the relocation of business where this will improve their economic and environmental sustainability; whether this includes waste management is unclear but it could be a consideration. Policy CSTP25 – Climate Change is important for these policies by requiring waste minimisation to be designed and built in to development at the outset.
- 21.4.4 The addition, expansion and development of centres in policy CSTP7 is expected to increase waste arisings, however, it offers the opportunity to regenerate and build upon the opportunities presented by a network in order to manage waste arisings more effectively and consider opportunities such as energy from waste.
- 21.4.5 Policy CSTP29 – Waste Strategy, will be particularly important in relation to this SA objective, addressing lowering waste arisings in the borough and increasing recycling which is currently below the national average. Policy CSTP31 has a positive impact because it resists, where possible, the importation of additional waste arisings beyond what is regionally required. The Minerals policies (CSTP31 and 32) are not anticipated to have an impact, although it should be noted that minerals extraction is associated with waste arisings and should be carefully managed.
- 21.4.6 There is an uncertainty regarding policy CSTP21 – Productive Land. Although it is not very likely, this policy could lead to an increase in waste production associated with an increase in agriculture and related activities. However, the policy mentions sustainable activity which could mitigate waste arisings. The handling of agricultural waste could be a consideration. Beyond this SA objective, new development, waste and minerals policies will be important in securing better soil quality and the remediation and restoration of derelict land in the borough left identified in the baseline, and this links in to dealing with contaminated land and the SA objective for minimising pollution (SO 7).

Policies for the Management of Development

- 21.4.7 PMD12 – Sustainable Buildings is the only management of development policy expected to have an impact against this objective and it is anticipated to be significantly beneficial by advocating good design and construction practices. It will therefore support the spatial policies and assist in overcoming potential negative impacts on this SA objective.

21.5 Recommendations for mitigation and/or enhancement

- 21.5.1 Although there are anticipated waste arisings from policies (both spatial and thematic) that set out development planned for Thurrock – housing, employment and infrastructure – any resulting negative SA objective impacts should be mitigated through support by other policies that advocate the management of waste. Any new housing and employment should be designed to minimise waste and home-owners and businesses should be encouraged to reduce, reuse and recycle. The construction process should also be a consideration, for example maximising reuse of materials where possible. Management of Development policy PMD12 – Sustainable Buildings, is particularly important in ensuring that the potentially negative impacts of the spatial and other policies are mitigated. In addition, new residential development will be led by the design standards set out in the Design and Sustainability SPD. Criteria and policies outlined in the Minerals and Waste Development Plan Document (MWDPD) should also assist in mitigation. There is less emphasis within the policies, however, in terms of encouraging a behavioural change in Thurrock residents and businesses towards reducing, reusing and recycling.
- 21.5.2 The spatial policies offer an opportunity to remediate brownfield land and sites that could be contaminated from the borough's long history of mineral extraction, waste disposal, dockland industry and oil refining. Other opportunities within the policies include energy from waste and community heating schemes in terms of locational opportunities and as part of CSTP25 – Addressing Climate Change or CSTP26 – Renewable or Low Carbon Energy Generation. The addition, expansion and development of centres in policy CSTP7 presents an opportunity to regenerate and build upon a 'network' in order to manage waste more effectively.

21.6 Monitoring

- 21.6.1 To monitor the impacts of the DPD on this sustainability theme, monitoring of the following indicators should be undertaken:
- Capacity of new waste management facilities by waste planning authority
 - Amount of municipal waste arising and managed by management types by waste planning authority
 - Residual household waste recycled and composted
 - Reduction of municipal waste landfilled

22 Conclusions

22.1 Introduction

22.1.1 This section aims to bring together the main findings of the SA. Firstly, it sets out a consideration of the most significant cumulative effects of the DPD. Following this, **Table 22** makes recommendations for monitoring of the most significant effects of the DPD. Finally, there is a short conclusion on the findings of the SA process.

Cumulative impacts

22.1.2 The DPD as a whole is likely to result in both positive and negative cumulative impacts on sustainable development. The most significant of those impacts are highlighted below.

22.1.3 Positive cumulative impacts are likely to include:

- Positive impacts on economic growth and diversity, employment and investment. Provided the employment growth and infrastructure improvements set out in the DPD are accompanied by investments on improving the skills of Thurrock's population;
- Positive impacts on sustainable land use and patterns of development by directing housing and employment growth to previously developed land within existing urban areas. These areas also have better transport links and are in need of regeneration;
- Positive impacts on achieving a more equitable distribution of prosperity and a fairer access to services by directing development and infrastructure and service improvements to areas that contain pockets of deprivation; also by increasing the number of homes (including affordable housing) and jobs in the Borough;
- Positive impacts on health and health inequalities by addressing the lack of health facilities and also providing and enhancing the factors that contribute to health and well being; these factors or determinants of health include: access to housing, employment and services, provision of open spaces, recreation and sports opportunities.

22.1.4 Adverse cumulative impacts are likely to include:

- Adverse impacts on flood risk resulting from the increase in development in areas at risk of flooding;
- Potential adverse impacts on wildlife and nature conservation sites from increasing pressures from development;
- Potential adverse impacts on consumption of resources and production of waste as a consequence of the increase in development and jobs.

Monitoring of significant effects

22.1.5 The following **Table 22** sets out the SA recommendations for monitoring of the likely significant impacts (both positive and negative) of the DPD on sustainability. The recommended indicators for monitoring are mostly drawn from the DPD's monitoring framework and are set out by the key sustainability themes included in the SA report.

Table 22: Recommendations for monitoring of significant impacts

SA Theme	Recommendations for monitoring
Economy and employment	<ul style="list-style-type: none"> • Employment rate within Thurrock • Average earnings of employees in Thurrock • Total amount of additional employment Floor space – by type • Employment land available – by type • Total amount of floorspace for ‘town centre uses’ • Number of VAT registrations for business
Sustainable Land Use	<ul style="list-style-type: none"> • Total amount of employment floorspace on Previously Developed Land (PDL) – by type • New and converted dwellings – on PDL • PDL that has been vacant or derelict for more than 5 years
Flood Risk	<ul style="list-style-type: none"> • Number of planning permissions granted contrary to Environment Agency advice on flooding and water quality • Number of properties at risk of flooding from all sources
Biodiversity, Flora and Fauna	<ul style="list-style-type: none"> • Change in areas of biodiversity importance • Improving local biodiversity – active management of local sites • Number of residents involved in the management of open space • Number of parks achieving green flag status
Air Quality and Noise	<ul style="list-style-type: none"> • Levels of air pollutants (PM2.5, PM10 and NOx) • Congestion • % Mode Travel to work • Number of green travel plans • Number and nature of noise complaints
Cultural Heritage, Landscape and Material Assets	<ul style="list-style-type: none"> • Participation in culture – use of public libraries • Number of tickets sold for arts and heritage events • Number of residents involved in the management of open space • Number of parks achieving green flag status • Number of planning applications refused on landscape grounds
Water	<ul style="list-style-type: none"> • Availability of water resources within Thurrock • Water quality in line with the Water Framework Directive requirements
Climatic Factors	<ul style="list-style-type: none"> • Percentage of new developments achieving BREEAM very good or excellent or Code for Sustainable Homes Levels 3 to 6 • Renewable energy generation • Adapting to climate change • Reduction in CO² emissions by sector (domestic, transport, industry)
Population and Social Equity	<ul style="list-style-type: none"> • People receiving income based benefits living in homes with a low energy efficiency rating • Number of working age people claiming benefits • Deprivation levels in Thurrock
Access to Services	<ul style="list-style-type: none"> • Access to primary care – ability to book at GP appointment • Access to services and facilities by public transport, walking and cycling • Number of primary school children travelling to school by car • Working age people with access to employment by public transport, walking and cycling
Housing	<ul style="list-style-type: none"> • Net additional pitches (Gypsy and Traveller) • Gross affordable home completions • Housing quality – Building for life assessments • New developments achieving BREEAM very good or excellent or Code for Sustainable Homes Level 3 to 6

SA Theme	Recommendations for monitoring
	<ul style="list-style-type: none"> • Numbers of households on the Council's waiting list
Crime and the Fear of Crime	<ul style="list-style-type: none"> • Number of reported crime incidents • Percentage of residents who feels safe during the day and night
Human Health	<ul style="list-style-type: none"> • People killed or seriously injured in road traffic accidents • Access to primary care – ability to book at GP appointment • Adult participation in sport (including light exercise) • All age all cause mortality rates (females / males) • Inequalities gap between most/least advantaged quintiles (female and male) • Maintaining or improving mortality rates in least disadvantaged quintiles (females and males)
Soil and Waste	<ul style="list-style-type: none"> • Capacity of new waste management facilities by waste planning authority • Amount of municipal waste arising and managed by management types by waste planning authority • Residual household waste recycled and composted • Reduction of municipal waste landfilled

Summary of the findings of the SA

- 22.1.6 In summary, the findings of the SA highlight that the key sustainability impacts of the DPD will arise from the high levels of growth that regional policy has set for Thurrock and that the Council will need to deliver by 2021.
- 22.1.7 These levels of growth will however also result in positive impacts in relation to improving the local economy, creating jobs and providing housing and services to existing and future residents. If the development is accompanied by all the improvements set out in the DPD including infrastructure, services, community, education and health facilities, open spaces, transport etc, then as a whole, the plan represents a fairly sustainable way of delivering the required growth.
- 22.1.8 It should be noted that while undertaking the appraisal, the assumption was made that the policies in the DPD would be fully implemented (i.e. they were taken at 'face value').

23 Next Steps

23.1 Consultation

- 23.1.1 To enable the community and other stakeholders to continue to contribute to the LDF, the Proposed Submission Core Strategy and Policies for the Management of Development DPD was consulted on from 26 February to 9 April 2010. This SA Report was available for consultation alongside the DPD, to facilitate more informed consultation responses.
- 23.1.2 Following the consultation, the consultation responses as well as the findings of the SA were taken into account by the Council. The DPD was drafted in its final form and submitted to the Secretary of State on 30 April 2010.
- 23.1.3 The SA report has been updated where relevant to reflect the outcome of recent the Focused Change Consultations that the Council has undertaken. Should the plan undergo any further significant change in the future, including as a result of taking onboard consultation responses, the significant changes will also be submitted for further SA.

23.2 SEA Statement

- 23.2.1 Once a plan or programme has been adopted, the SEA Directive requires those responsible for preparing it – in this case the Council - to provide the public and the Consultation Bodies with information on how environmental considerations and consultation responses are reflected in the plan or programme and how its implementation will be monitored in the future. The Directive states that:

Plan or programme proponents should ensure that, when a plan or programme is adopted, the Environmental Consultation Bodies and the public "are informed and the following items are made available to those so informed:

- (a) the plan or programme as adopted;
- (b) a statement summarising how environmental considerations have been integrated into the plan or programme...[including] the reasons for choosing the plan or programme as adopted, in the light of the other reasonable alternatives dealt with, and
- (c) the measures decided concerning monitoring [of the plan]

(Annex 9(1))

- 23.2.2 In light of this requirement, the Council will prepare an SEA / SA Statement setting out the above information (reporting on how sustainability considerations have been taken into account rather than environmental considerations only).

Appendix 1 – SEA Checklist

23.2.3 Quality assurance is an important element of the appraisal exercise. It helps to ensure that the requirements of the SEA Directive are met, and show how effectively the appraisal has integrated sustainability considerations into the plan-making process.

Guidance checklist	Chapter	Carried out by
<ul style="list-style-type: none"> The plan's purpose and objectives are made clear. 	2	URS Scott Wilson
<ul style="list-style-type: none"> Sustainability issues, including international and EC objectives, are considered in developing objectives and targets. 	4 and 8 to 21	URS Scott Wilson
<ul style="list-style-type: none"> SA objectives are clearly set out and linked to indicators and targets where appropriate. 	4	URS Scott Wilson
<ul style="list-style-type: none"> Links with other related plans, programmes and policies are identified and explained. 	4 and Appendix 2	URS Scott Wilson
<ul style="list-style-type: none"> Conflicts that exist between SA objectives, between SA and plan objectives, and between SA and other plan objectives are identified and described. 	5	URS Scott Wilson
<ul style="list-style-type: none"> The environmental consultation bodies are consulted in appropriate ways and at appropriate times on the content and scope of the SA Report. 	Scoping Report and previous SA reports	Thurrock Council
<ul style="list-style-type: none"> The appraisal focuses on significant issues. 	Scoping Report, previous SA reports and 7 to 21	URS Scott Wilson
<ul style="list-style-type: none"> Technical, procedural and other difficulties encountered are discussed; assumptions and uncertainties are made explicit. 	3	URS Scott Wilson
<ul style="list-style-type: none"> Reasons are given for eliminating issues from further consideration. 	Scoping Report, previous SA reports	URS Scott Wilson
<ul style="list-style-type: none"> Realistic alternatives are considered for key issues, and the reasons for choosing them are documented. 	Plan Documents, previous SA reports, 5 and 7.	URS Scott Wilson
<ul style="list-style-type: none"> Alternatives include 'do nothing' and/or 'business as usual' scenarios wherever relevant 	4	URS Scott Wilson
<ul style="list-style-type: none"> The sustainability effects (both adverse and beneficial) of each alternative are identified and compared 	Plan Documents, previous SA reports, 5 and 7	URS Scott Wilson

Guidance checklist	Chapter	Carried out by
<ul style="list-style-type: none"> Inconsistencies between the alternatives and other relevant plans, programmes or policies are identified and explained. 	Plan Documents, previous SA reports, 5 and 7	URS Scott Wilson
<ul style="list-style-type: none"> Reasons are given for selection or elimination of alternatives. 	Plan Documents, previous SA reports, 5 and 7	URS Scott Wilson
<ul style="list-style-type: none"> Relevant aspects of the current state of the environment and their likely evolution without the plan are described. 	4 and 8 to 21	URS Scott Wilson
<ul style="list-style-type: none"> Characteristics of areas likely to be significantly affected are described, including areas wider than the physical boundary of the plan area where it is likely to be affected by the plan where practicable. 	4 and 8 to 21	URS Scott Wilson
<ul style="list-style-type: none"> Difficulties such as deficiencies in information or methods are explained. 	3	URS Scott Wilson
<ul style="list-style-type: none"> Likely significant social, environmental and economic effects are identified, including those listed in the SEA Directive (biodiversity, population, human health, fauna, flora, soil, water, air, climate factors, material assets, cultural heritage and landscape), as relevant. 	7 to 21	URS Scott Wilson
<ul style="list-style-type: none"> Both positive and negative effects are considered, and where practicable, the duration of effects (short, medium or long-term) is addressed. 	7 to 21	URS Scott Wilson
<ul style="list-style-type: none"> Likely secondary, cumulative and synergistic effects are identified where practicable. 	7 to 21	URS Scott Wilson
<ul style="list-style-type: none"> Inter-relationships between effects are considered where practicable. 	7 to 21	URS Scott Wilson
<ul style="list-style-type: none"> Where relevant, the prediction and evaluation of effects makes use of accepted standards, regulations, and thresholds. 	7 to 21	URS Scott Wilson
<ul style="list-style-type: none"> Methods used to evaluate the effects are described. 	3	URS Scott Wilson
<ul style="list-style-type: none"> Measures envisaged to prevent, reduce and offset any significant adverse effects of implementing the plan are indicated. 	7 to 21	URS Scott Wilson
<ul style="list-style-type: none"> Issues to be taken into account in development consents are identified. 	N/A	
<ul style="list-style-type: none"> Is clear and concise in its layout and presentation. 	All	URS Scott Wilson
<ul style="list-style-type: none"> Uses simple, clear language and avoids or explains technical terms. 	Non Technical Summary	URS Scott Wilson
<ul style="list-style-type: none"> Uses maps and other illustrations where appropriate. 	All	URS Scott Wilson
<ul style="list-style-type: none"> Explains the methodology used. 	3	URS Scott Wilson

Guidance checklist	Chapter	Carried out by
<ul style="list-style-type: none"> Explains who was consulted and what methods of consultation were used. 	Scoping Report and 23	URS Scott Wilson
<ul style="list-style-type: none"> Identifies sources of information, including expert judgement and matters of opinion. 	7 to 21 and Scoping Report	URS Scott Wilson
<ul style="list-style-type: none"> Contains a non-technical summary. 	Yes (separate document)	URS Scott Wilson
Consultation		
<ul style="list-style-type: none"> The SA is consulted on as an integral part of the plan-making process. 	Yes (Chapter 1.7)	URS Scott Wilson
<ul style="list-style-type: none"> The consultation bodies, other consultees and the public are consulted in ways which give them an early and effective opportunity within appropriate time frames to express their opinions on the draft plan and SA Report. 	Yes	Thurrock Council
<ul style="list-style-type: none"> The SA Report and the opinions of those consulted are taken into account in finalising and adopting the plan. 	Yes (Chapter 1.7)	
<ul style="list-style-type: none"> An explanation is given of how they have been taken into account. 	Yes (Chapter 1.7)	
<ul style="list-style-type: none"> Reasons are given for choices in the adopted plan, in the light of other reasonable options considered. 	Yes (Chapters 5 and 7)	
<ul style="list-style-type: none"> Measures proposed for monitoring are clear, practicable and linked to the indicators and objectives used in the SA. 	7 to 21 (see also Authority Monitoring Report)	URS Scott Wilson
<ul style="list-style-type: none"> Monitoring is used, where appropriate, during implementation of the plan to make good deficiencies in baseline information in the SA. 	Forthcoming	
<ul style="list-style-type: none"> Monitoring enables unforeseen adverse effects to be identified at an early stage (These effects may include predictions which prove to be incorrect.) 	Forthcoming	
<ul style="list-style-type: none"> Proposals are made for action in response to significant adverse effects. 	Forthcoming (in light of future monitoring)	

Appendix 2 – Update of the policy review

Policy Document	Key messages
Air Quality Strategy for England, Scotland, Wales and Northern Ireland ⁶⁷	<ul style="list-style-type: none"> The Government's revised strategy - required under the Environment Act 1995 - sets out plans to improve and protect air quality in the UK. It considers ambient air quality only, leaving occupational exposure, in-vehicle exposure and indoor air quality to be addressed separately. The strategy sets health-based objectives for nine main air pollutants. The pollutants covered are: Benzene; 1,3-butadiene; carbon monoxide (CO); Lead; nitrogen dioxide (NO₂); Ozone; Particles (PM₁₀); sulphur dioxide (SO₂); polycyclic aromatic hydrocarbons. Performance against these objectives is monitored where people are regularly present and might be exposed to air pollution.
Directive on Ambient Air Quality and Cleaner Air for Europe (2008) ⁶⁸	<ul style="list-style-type: none"> Came into force in June 2008 and will be transposed into national legislation by June 2010. Provides a new regulatory framework for PM 2.5
Delivering a Sustainable Transport System (DaSTS) ⁶⁹	<ul style="list-style-type: none"> To take account of transport's wider impact on climate change, health, quality of life and the natural environment, DaSTS sets five objectives which transport must deliver. These are: <ul style="list-style-type: none"> To support national economic competitiveness and growth, by delivering reliable and efficient transport networks; To reduce transport's emissions of carbon dioxide and other greenhouse gases, with the desired outcome of tackling climate change; To contribute greater equality of opportunity for all citizens, with the desired outcome of achieving a fairer society; and To improve quality of life for transport users and non-transport users, and to promote a healthy natural environment.
Climate Change Act ⁷⁰	<ul style="list-style-type: none"> The Climate Change Act 2008 sets targets for greenhouse gas emission reductions through action in the UK of at least 80% by 2050, and reductions in CO₂ emissions of at least 26% by 2020, against a 1990 baseline
UK Renewable Energy Strategy ⁷¹	<ul style="list-style-type: none"> Sets out the path for the UK to meet legally-binding target to ensure 15% of energy comes from renewable sources by 2020. The Strategy aims to help tackle climate change, reduce the UK's emissions of carbon dioxide and promote the security of the energy supply.
Future Water: The Government's water strategy for England ⁷²	<ul style="list-style-type: none"> Sets out the Government's vision for how the water sector will look by 2030 and some of the steps necessary to achieve it. The Strategy requires planning authorities to work closely with the water companies and the Environment Agency on timing and numbers of new households in areas likely to see the greatest growth.
Transforming	<ul style="list-style-type: none"> The framework sets out a package of measures that aim to shape the way that regeneration

⁶⁷ DEFRA (2007) The Air Quality Strategy for England, Scotland, Wales and Northern Ireland [online] available at: <http://www.defra.gov.uk/environment/airquality/strategy/pdf/air-qualitystrategy-vol1.pdf> (accessed: 21 January 2010)

⁶⁸ Directive 2008/50/EC of the European Parliament and of the Council of 21 May 2008 on ambient air quality and cleaner air for Europe available at: <http://www.defra.gov.uk/ENVIRONMENT/airquality/eu-int/eu-directives/airqual-directives/> (accessed: 21 January 2010)

⁶⁹ DfT (2009). *Delivering a Sustainable Transport System* [online] available at: <http://www.dft.gov.uk/about/strategy/transportstrategy/dasts/> (accessed 19 January 2010).

⁷⁰ *Climate Change Act 2008*. (c. 27), London: HMSO [online] available at: http://www.opsi.gov.uk/acts/acts2008/ukpga_20080027_en_1 (accessed 18 January 2010).

⁷¹ DECC (2009). *UK Renewable Energy Strategy* [online] available at: http://www.decc.gov.uk/en/content/cms/what_we_do/uk_supply/energy_mix/renewable/res/res.aspx (accessed 21 January 2010).

⁷² Defra (2008). *Future water: the Government's water strategy for England* [online] available at: <http://www.defra.gov.uk/environment/quality/water/strategy/pdf/future-water.pdf> (accessed 18 January 2010).

Policy Document	Key messages
Places; changing lives: a framework for regeneration ⁷³	<p>is carried out in England. It focuses on three priority outcomes:</p> <ul style="list-style-type: none"> o Improved economic performance in deprived areas o Improved rates of work and enterprise in deprived areas; and o Creating sustainable places where people want to live and can work; and businesses want to invest
Equalities Bill ⁷⁴	<ul style="list-style-type: none"> • The Equalities Bill which has not yet received Royal Assent has two main purposes: i) to harmonise discrimination law and; ii) to strengthen the law to support progress on equality • Importantly, the Bill will place a new duty on certain public bodies (including local authorities) to consider socio-economic disadvantage when making strategic decisions about how to exercise their functions.
Draft PPS 15: Planning for the Historic Environment	<ul style="list-style-type: none"> • Consultation for the revised PPS closed in October 2009 and will replace PPG15 and PPG16. It is intended to reflect a more modern, integrated approach which defines the historic environment in terms of heritage assets to be conserved in accordance with a set of principles and in proportion to their significance.
Innovation White Paper: Innovation Nation ⁷⁵	<ul style="list-style-type: none"> • This white paper aims to broaden innovation policy to include more than the traditional focus on science, technology and research. The role of promoting market demand is highlighted.
Raising Expectations: Enabling the System to Deliver ⁷⁶	<ul style="list-style-type: none"> • This White Paper outlines wide-ranging reforms to the provision of skills and training to young people and adults, including details of both the Skills Funding Agency and the National Apprenticeship Service.
Green Infrastructure and Housing Growth Policy ⁷⁷	<ul style="list-style-type: none"> • A focus on green infrastructure provision is one important means of achieving landscape scale conservation. Natural England's position paper on housing growth and green infrastructure describes how it plays a major role in ensuring that housing growth is accommodated with minimum impact on the natural environment and delivers maximum benefits for the natural environment and people together.
Future Landscapes (2009, Consultation) ⁷⁸	<ul style="list-style-type: none"> • The draft policies are as follows: <ul style="list-style-type: none"> o Policy 1 - Change is a fundamental characteristic of landscapes. Our future landscapes should emerge as a result of planned interventions, set within the context of a long term vision. o Policy 2 - The character, condition and quality of England's future landscapes should be built on an understanding of existing landscape character. o Policy 3 - Our vision for England's landscapes will accommodate a range of different futures. Some landscapes will be transformed and some will change less markedly. o Policy 4 - The vision for England's future landscapes must be developed and owned by all major stakeholders who impact upon the use and management of the land. o Policy 5 - There should be a multi-function approach to future landscape management, with England's future landscapes planned and managed to provide a range of ecosystem goods and services. o Policy 6 - Developing our future landscapes requires an improved understanding of

⁷³ CLG (2009). *Transforming places; changing lives: a framework for regeneration* [online] available at: <http://www.communities.gov.uk/publications/citiesandregions/transformingplaces> (accessed 19 January 2010).

⁷⁴ HR Parliament (2009). *Equality Bill* [online] available at: <http://services.parliament.uk/bills/2008-09/equality/documents.html> (accessed 19 January 2010).

⁷⁵ DIUS (2008). *Innovation Nation* [online] available at: http://www.dius.gov.uk/innovation/innovation_nation (accessed: 21 January 2010)

⁷⁶ DIUS & DCSF (2008) *Raising expectations: enabling the system to deliver* [online] available at: http://www.dcsf.gov.uk/publications/raisingexpectationswhitepaper/pdfs/Raising_Expectations.pdf (accessed: 21 January 2010)

⁷⁷ Natural England (2008) *Natural England's Green Infrastructure and Housing Growth Policy* [online] available at: http://www.naturalengland.org.uk/Images/Housing%20and%20GI%20policy_tcm6-9324.pdf (accessed: 21 January 2010)

Policy Document	Key messages
	<p>people's sense of place, values and perceptions, and of the factors that influence attitudes towards landscape change, in order that we can encourage more informed debate about specific proposals affecting landscapes.</p>
<p>Securing Biodiversity – a new framework for delivering priority habitats and species⁷⁹</p>	<ul style="list-style-type: none"> • Sets out a priority for developing landscape-scale approaches to restoring ecosystems and embedding climate change adaptation principles, recognising the need to reverse fragmentation of habitats by restoring the wider landscape.
<p>A Strategy for England's Trees, Woods and Forests⁸⁰</p>	<ul style="list-style-type: none"> • The Strategy (which replaces the England Forestry Strategy) promotes managing and creating woodland so that it delivers wider public benefits.
<p>The Code for Sustainable Homes⁸¹</p>	<ul style="list-style-type: none"> • The Code for Sustainable Homes measures the sustainability of a new home against nine categories of sustainable design and uses a 1 to 6 star rating system to communicate the overall sustainability performance of a new home. Minimum standards for energy and water use are set at each level. Since 1 May 2008, a rating against the Code has been mandatory for new homes. • From April 2008 all new social housing must achieve a minimum of Code Level 3. The Code is voluntary for privately built properties. • All new homes from 2016 must be built to zero carbon standards (Code Level 6), all new public buildings by 2018 and all new commercial buildings by 2019. This is to be achieved through a tightening of the Building Regulations.
<p>NHPAU Advice⁸²</p>	<ul style="list-style-type: none"> • The National Housing and Planning Advice Unit (NHPAU) was established in response to the Barker Review of Housing Supply and is tasked with helping to make market housing more affordable and with addressing the rising trend in the number of people prevented from getting onto the property ladder. • According to the NHPAU's latest advice, all things being equal, current RSSs figures would lead to a worsening of affordability. • The NHPAU's most recent advice sets out a housing supply range for each region which they consider should be tested by regional partners, as early as possible, through the planning process. • For the East of England the suggested supply ranges from 388,000 to 486,300 total net additions by 2020. Taken together, the upper end of their regional supply ranges would see 297,700 new homes delivered per annum in England by 2016. • For Thurrock the NHPAU has set lower and upper levels of 25,554 and 31,226 new homes between 2007 and 2026.
<p>PPS: Planning and</p>	<ul style="list-style-type: none"> • This supplement sets out how planning - in providing for new homes, jobs and infrastructure - should contribute to reducing emissions and stabilising climate change, and take into

⁷⁸ Natural England (2009) Future Landscapes Consultation Document [online] available at:

http://www.naturalengland.org.uk/Images/futurelandscapes_tcm6-8638.pdf (accessed: 21 January 2010)

⁷⁹ Natural England (2009). *Securing Biodiversity – a new framework for delivering priority habitats and species* [online] available at:

<http://www.naturalengland.org.uk/ourwork/conservation/biodiversity/protectandmanage/framework.aspx> (accessed 21 January 2010).

⁸⁰ Forestry Commission (2007). A strategy for England's trees, woods and forests [online] available at: www.forestry.gov.uk/efs

(accessed: 21 January 2010)

⁸¹ DCLG (2008). The Code for Sustainable Homes: setting the standard in sustainability for new homes [online] available at:

<http://www.communities.gov.uk/documents/planningandbuilding/pdf/codesustainhomesstandard.pdf> (accessed: 21 January 2010)

⁸² National Housing and Planning Advice Unit (2008). Meeting the housing requirements of an aspiring and growing nation: taking the medium and long-term view - Advice to the Minister about the housing supply range to be tested by Regional Planning Authorities [online] available at: <http://www.communities.gov.uk/nhpau/keypublications/reports/meetinghousingrequirements/> (accessed: 21 January 2010)

Policy Document	Key messages
Climate Change – Supplement to PPS 1 ⁸³	<p>account the unavoidable consequences.</p> <ul style="list-style-type: none"> The document establishes tackling climate change as a key Government priority for the planning system, and that the ambition and policies in the PPS should be ‘fully reflected’ by planning authorities in the preparation of LDDs.
Waste Strategy 2007 ⁸⁴	<ul style="list-style-type: none"> The strategy describes key principles necessary to take waste management forward in a sustainable way, namely best practicable environmental option (BPEO), the waste hierarchy and the proximity principle. It sets a major target of increasing recycling rates by 40% by 2010 and reducing waste by 45% by 2020. These targets are more stringent than those set in Waste Strategy 2000. There is a major emphasis on climate change, for example, the net reduction in global greenhouse gas emissions from the increase in diversion of waste from landfill and waste prevention measures.
Future Water: The Government’s Water Strategy for England ⁸⁵	<ul style="list-style-type: none"> Sets out the Government’s vision for how the water sector will look by 2030 and some of the steps necessary to achieve it. The Strategy addresses a range of water-related issues including managing water demand through increased water efficiency and reduced water wastage; enhancing future water supply through new infrastructure; addressing water quality through tackling pollution; managing surface water runoff through sustainable drainage; and managing river and coastal flood risk.
East of England Plan ⁸⁶	<ul style="list-style-type: none"> The Plan sets out the overall spatial vision and objectives for the region. The Plan sets growth targets for Thurrock of 18,500 new dwellings and a share of 55,000 net additional jobs to be delivered in the period between 2001 and 2021. Thurrock’s share is 26,000 and should be kept in line with housing growth and regional sustainability. Thurrock’s Urban Area is one of the locations in the East of England where new development should be concentrated (Policy SS3) and one of the regional strategic locations for employment (Policy E3). Key to realising “the economic potential of the region and its people” is: <ul style="list-style-type: none"> facilitating the development needed to support the region’s business sectors and clusters, improving skills and widening opportunities in line with the Regional Economic Strategy; providing for job growth broadly matching increases in housing provision and improving the alignment between the locations of workplaces and homes; maintaining and strengthening the East of England’s inter-regional connections by improving access to economic opportunities in London; and ensuring adequate and sustainable transport infrastructure. Other relevant objectives and policies include: <ul style="list-style-type: none"> 60% of all new development is to be on previously developed land (Policy SS2) By 2010, 10% of the region’s energy will come from renewable sources, rising to 17% by 2020 Policy TG/SE1 identifies Thurrock Riverside as a “zone of change and influence” developed by regeneration of previously used sites

⁸³ CLG (2007). PPS: Planning and Climate Change – Supplement to PPS 1 [online] available at: <http://www.communities.gov.uk/planningandbuilding/planning/planningpolicyguidance/planningpolicystatements/planningpolicystatements/pps1/> (accessed: 21 January 2010)

⁸⁴ Defra (2007). Waste Strategy for England [online] available at: <http://www.defra.gov.uk/ENVIRONMENT/waste/strategy/strategy07/pdf/waste07-strategy.pdf> (accessed: 21 January 2010)

⁸⁵ Defra (2008) Future Water: The Government’s Water Strategy for England [online] available at: <http://www.defra.gov.uk/Environment/water/strategy/> (accessed: 21 January 2010)

⁸⁶ EERA (2008) East of England Plan: the Regional Spatial Strategy for the East of England [online] available at http://www.gos.gov.uk/goeast/planning/regional_planning/ (accessed: 21 January 2010)

Policy Document	Key messages
	<ul style="list-style-type: none"> ○ Policy WM1 identifies the need to minimise the impact of new development, particularly in KCDC, on regional waste management requirements ○ Policy WM2 sets targets of municipal waste recovery of 50% at 2010 and 70% at 2015; and commercial industrial waste recovery of 72% at 2010 and 75% at 2015 ○ New development of more than 10 dwellings or 1000m2 of non-residential floorspace should secure at least 10% of their energy from decentralised and renewable or low-carbon sources, unless this is not feasible or viable
Policy Thurrock Single Review ⁸⁷ ETG2 KCDC: Issue	<ul style="list-style-type: none"> ● The single issue review was undertaken to prepare a robust strategic planning framework to guide the regeneration of the Lakeside basin. ● Proposed modifications were published by the SoS to Policy ETG2 and identifies the northern part of the Lakeside basin as a regional centre under Policy E5 of the East of England Plan. Retail expansion is limited to 50,000 sqm of net comparison floorspace by 2019 and no expansion can be approved until LDDs satisfy a series of pre-conditions set out in the policy.
Accommodation for Gypsies and Travellers and Travelling Showpeople in the East of England: A revision to the RSS for the East of England ⁸⁸	<ul style="list-style-type: none"> ● Following the single issue review of the RSS, a revised policy was drafted to provide strategic guidance for local authorities in identifying locations for additional pitches and plots through their LDF as well as other means. ● Thurrock is required to provide a minimum of 44 additional pitches 2006-2011, resulting in a minimum of 124 pitches in 2011. ● Beyond 2011 provision should be made for an annual 3% compound increase in residential pitch provision, distributed on the basis of boroughs accommodating the same proportion of the regional requirement as in policy H3 for 2006-2011. ● Local authorities must also work together to establish a network of transit pitches. Essex, Southend-on-Sea and Thurrock must work together to delivery an additional 30 additional pitches 2006-2011 that form a 'distributed network aligned with transport routes and urban centres.' ● Essex, Southend-on-Sea and Thurrock should work together to provide an additional 103 plots 2006-2011 for Travelling Showpeople and include provision for an annual 1.5%

⁸⁷ EERA (2009). *East of England Plan Single Issue Review: Thurrock KCDC* [online] available at: <http://www.eera.gov.uk/What-we-do/developing-regional-strategies/east-of-england-plan/planning-for-lakeside-basin-single-issue-review/> (accessed 21 January 2010).

⁸⁸ Secretary of State (2009). *Accommodation for Gypsies and Travelling Showpeople in the East of England: a revision to the RSS for the East of England* [online] available at: http://www.gos.gov.uk/goeast/planning/regional_planning/687221/ (accessed 19 January 2010).

Policy Document	Key messages
	compound increase in plots 2011 to 2021.
Regional Economic Strategy (RES) ⁸⁹	<ul style="list-style-type: none"> • The Regional Economic Strategy for the East of England 2008-2031 sets out an overall vision for the region in 2031, which is based on the region achieving high levels of international competitiveness, developing a global reputation for innovation and business growth, and attracting and retaining the best talent. The RES identifies the main economic challenges for the East of England as raising rates of productivity growth, increasing entrepreneurship and the need to better manage the impacts of economic success in terms of economic participation and environmental quality. Key to this strategy is the identification of larger urban areas, regional cities and their surrounding rural areas as the drivers of physical growth and economic success. The RES sets headline targets in a number of areas including: <ul style="list-style-type: none"> ○ growth in GVA per employee over 2008-2031 of 2.1% p.a., and in GVA per capita of 2.3% p.a.; ○ employment rate of 80% for the working population and of 70% for the 16-74 population by 2031; ○ NVQ Level 2 or above held by 90% of working-age population by 2020, NVQ 3 or above held by 68%, and NVQ Level 4 or above held by 40%; and ○ raising the ratio of lower-quartile to average incomes to 60% by 2031. • The strategy includes the development of the London Gateway port with the creation of up to 14,000 jobs and retail and employment at Lakeside Basin.
Thames Gateway Delivery Plan ⁹⁰	<ul style="list-style-type: none"> • The Thames Gateway Delivery Plan provides a framework for using public funding economically as well as efficient use of local ownership, project expertise and private entrepreneurship. • The Thames Gateway is an important area when considering the wider UK economy as a strategic location for employment, transport, education, public open spaces and housing. Development in the region has three driving forces: a strong economy, improvements in quality of life for local communities and the development of the area as an eco-region. The region includes a 40 mile stretch from Canary Wharf to Southend; this area includes Thurrock as a priority area and the London Gateway dock.
East of England Biodiversity Delivery Plan 2008 – 2015 ⁹¹	<ul style="list-style-type: none"> • The Plan promotes landscape scale approaches to conservation, and particularly promotes the objective of integrating the concept of 'networking nature' into the planning system. One action that is promoted to achieve this is the development and use of biodiversity opportunity mapping at the regional and local level. Three other objectives relate to water, demonstrating the clear links between biodiversity related objectives and objectives related to water resources, water quality and climate change. These are to: <ul style="list-style-type: none"> ○ ensure sufficient water is available to sustain the region's wetlands; ○ continue improvements in water quality; and ○ ensure regional and local policies promote wetland biodiversity and floodplains as a key component of sustainable flood risk management.
NHS South West Essex – Strategic Plan 2009-2014 ⁹²	<ul style="list-style-type: none"> • The five year strategy maps out how the organisation's vision will be achieved over the time period. It is also backed up by an operational plan that will be refreshed every year. The council vision will be supported by four goals: <ul style="list-style-type: none"> ○ To improve life expectancy and reduce health inequalities through faster improvements in the most deprived areas of our community;

⁸⁹ East of England Development Agency (2008) The Regional Economic Strategy for the East of England [online] available at: http://www.eastofengland.uk.com/res/files/RES_Complete.pdf (accessed: 21 January 2010)

⁹⁰ CLG (2007). *Thames Gateway Delivery Plan* [online] available at: <http://www.communities.gov.uk/publications/thamesgateway/deliveryplan> (accessed 18 January 2010).

⁹¹ East of England Biodiversity Forum (2008) East of England Biodiversity Delivery Plan [online] available at: http://www.eobiodiversity.org/pdfs/EEBF_Delivery_Plan.pdf (accessed: 21 January 2010)

Policy Document	Key messages
	<ul style="list-style-type: none"> ○ To support healthy lives by reducing the key determinants of ill health, providing preventative care and access to screening; ○ To improve access to high quality care so that care is provided at the right time, and in the right place; and ○ All patients experience high quality care which is safe, clinically effective and offers a good patient experience
Thurrock's Biodiversity Action Plan ⁹³	<ul style="list-style-type: none"> • The plan identifies priority species for Thurrock that should be considered alongside nationally protected species during development and regeneration. • This document also states that Local Development Documents (LDD) should ensure that recognised areas of wildlife importance are given adequate protection and that developers take a responsible attitude towards ecology, enhancing it where practicable • The action plan also recommends that the biodiversity checklist and guidance developed by the Essex Biodiversity Project "Integrating biodiversity into development realising the benefits" should be used as part of Thurrock's planning process to ensure biodiversity is considered. • In addition the plan contains the following objectives: <ul style="list-style-type: none"> ○ To raise awareness of the importance of biodiversity. ○ To raise awareness of all biodiversity action plans, habitats and species. ○ To monitor populations of BAP species and areas of BAP habitats in Thurrock. ○ To maintain the existing areas of habitats and population of species listed in the BAP and work to increase these where possible. ○ To ensure that habitats are managed and maintained in the light of their ecological value. ○ To encourage responsible maintenance of land in Thurrock.
Thurrock Greengrid Strategy 2006-2011 ⁹⁴	<ul style="list-style-type: none"> • The Greengrid Strategy for Thurrock is a local response to the Thames Gateway South Essex Greengrid Strategy that will help to coordinate the development of multi-functional green spaces and links in Thurrock's town and countryside. • Strategic biodiversity assets are identified in the Green Infrastructure Plan (GIFP) and represent sites with national or international biodiversity designations. These sites are the priority sites within the Borough to safeguard for biodiversity. Locally designated biodiversity sites also have a key role to play in a successful Greengrid for Thurrock and have been incorporated in the final Thurrock Greengrid.
Thurrock Transport Strategy ⁹⁵	<ul style="list-style-type: none"> • The Thurrock Transport Strategy describes the Council's intent to deliver transport improvements between 2008 and 2021 and will provide the main strategic focus for the third and fourth Local Transport Plans (LTPs), as well as influence the on-going delivery of the second LTP. The vision is to create a transport system for Thurrock that: <ul style="list-style-type: none"> ○ Is fully inclusive, meeting the social needs of residents ○ Is integrated to provide seamless multi-modal journeys ○ Is accessible for everyone, safe and attractive to use ○ Delivers sustainable community regeneration and growth ○ Reflects the exceptional circumstances of Thurrock as an international centre for

⁹² NHS South West Essex (2009). *Strategic Plan* [online] available at: http://www.swessexpct.nhs.uk/uploads/documents/strategic-plan-2009-2014-summary_web.pdf (accessed 21 January 2010).

⁹³ Thurrock Council (2007). *Thurrock Biodiversity Action Plan* [online] available at: http://www.thurrock.gov.uk/countryside/content.php?page=biodiversity_action (accessed 21 January 2010).

⁹⁴ Thurrock Council (2006). *Thurrock Greengrid Strategy 2006-2011* [online] available at: <http://www.thurrock.gov.uk/countryside/greengrid/content.php?page=strategy> (accessed 18 January 2010).

⁹⁵ Thurrock Council (2008). *Thurrock Transport Strategy 2008 – 2021* [online] available at: http://www.thurrock.gov.uk/travel/transport/content.php?page=its_2008 (accessed 18 January 2010).

Policy Document	Key messages
	<p>logistics and commercial development</p> <ul style="list-style-type: none"> • The Strategy identifies many challenges for Thurrock including providing transport choices for the high levels of in and out-commuting, continuing to increase bus and train use, improve accessibility in non-local services such as hospitals and further education, overcoming the remoteness of London Gateway from the urban area, and addressing congestion and capacity issues affecting key infrastructure.
Sustainable Communities Strategy ⁹⁶	<ul style="list-style-type: none"> • The Strategy sets out the vision for Thurrock which is: <i>“We want Thurrock to be at the dynamic heart of the Thames Gateway, a place of ambition, enterprise and opportunity, where communities and businesses flourish and the quality of life for local people is continually improving.”</i> To achieve the vision the LSP has set five priorities: <ul style="list-style-type: none"> ○ To ensure a safe, clean and green environment ○ To improve the education and skills of local people ○ To encourage and promote job creation and economic prosperity ○ To provide high quality and accessible public services ○ To build pride, respect and responsibility in Thurrock’s communities and residents
Thurrock Local Area Agreement (LAA)	<ul style="list-style-type: none"> • Thurrock’s LAA is built upon the strategic objectives set out in the Sustainable Community Strategy. It sets out the priorities for the local area for the three year period between 2007 to 2010 together with actions for sustainable improvements for: <ul style="list-style-type: none"> ○ Children and young people ○ Safer and strong communities ○ Healthier communities ○ Economic development and enterprise
Thurrock Neighbourhood Renewal Strategy	<ul style="list-style-type: none"> • This strategy has established the priority areas in the borough for renewal based on profiling information primarily derived from the ONS’ IMD (2007). It identifies those communities with the highest levels of deprivation as found in parts of Tilbury, Grays Riverside, Belhus and Purfleet.
Thurrock Economic Development Strategy	<ul style="list-style-type: none"> • This strategy is led by ‘strategic interventions’ which will form the top-down plank to regeneration which will complement the bottom-up, community-based approach
Thames Gateway Development Corporation Corporate Plan ⁹⁷	<ul style="list-style-type: none"> • The Corporate Plan identifies the need to reduce the high levels of deprivation experienced in Thurrock and was particularly concerned with low levels of employment, income and qualifications in the most deprived neighbourhoods. The TTGDC identified a number of specific areas where direct neighbourhood renewal initiatives are required and a number of masterplans have also been produced for several regeneration areas.

⁹⁶ Thurrock Council (2007). *Sustainable Communities Strategy* [online] available at: <http://www.thurrock-community.org.uk/lsp/content.php?page=strategy> (accessed 18 January 2010).

⁹⁷ Thames Gateway Development Corporation (2008). *Corporate Plan 2008-2011* [online] available at: <http://www.ltgdcc.org.uk/pdf/corporateplan08to11.pdf> (accessed 20 January 2010).

Appendix 3 – Core Strategy and Policies for the Management of Development DPD: Strategic Objectives

DPD Objectives tested for compatibility in this document	
SSO1	Achieve sustainable communities in Thurrock with regeneration and growth focused in the existing urban areas (Purfleet, Lakeside/West Thurrock, Grays, Aveley/South Ockendon, Tilbury, Stanford-Le-Hope, Corringham) with high quality mixed developments and higher density in locations accessible to existing and planned public transport and other non-car modes of travel.
SSO2	Increase prosperity and employment growth in Thurrock in the five strategic Economic Hubs of Purfleet, Lakeside/West Thurrock, Grays, Tilbury and London Gateway whilst seeking a sustainable balance between housing and jobs growth across the borough supported by integration and phasing with existing and planned transport and community infrastructure.
SSO3	Support local business, attract inward investment and diversify the Thurrock economy into high skill logistics, cultural and environmental industries and additional public services to provide improved skills and jobs for local people by providing for land and sites of appropriate type and location.
SSO4	To provide for sufficient sustainable housing to meet the sub-regional and regional requirement for Thurrock and provide for a mix of type, tenure and affordable housing to meet local peoples need, including family homes and smaller homes to meet lifetime need.
SSO5	Create a safe, healthy, accessible and inclusive environment for the community of Thurrock through high quality design led development and open space.
SSO6	Secure and make provision for health and education, and other community facilities that will enhance Thurrock's community well being by addressing current deficits and the requirements arising from new development focused on the urban areas (Purfleet, Lakeside/West Thurrock, Grays, Aveley/South Ockendon, Tilbury, Stanford-Le-Hope, Corringham).
SSO7	Plan for provision of transport and utility infrastructure that will support and underpin a sustainable level of development in new and existing communities and address current deficits to include key interchanges at Grays and Lakeside.
SSO8	Enhance the vitality and character of Grays as major administrative, civic, cultural, educational and retail centre. Maintain existing local centres in the borough for retail and community facilities. Provide some new local neighbourhood facilities and promote and diversify the role of Lakeside as a sub-regional centre for employment, retail and leisure.
SSO9	Promote participation and pride in culture and sport, leisure and recreation activities in Thurrock by the provision of sites and safeguarding of facilities to include Sports Hubs at Belhus and Blackshots and key flagship leisure at Lakeside.
SSO10	Provide in Thurrock a safe transport system that supports accessibility, manages the need to travel, and encourages the use of more environmentally friendly modes of transport such as cycling, walking and public transport.
SSO11	To sustain and enhance the open character of the Green Belt in Thurrock and only allow development in very special circumstances.
SSO12	Protect and enhance the natural, historic and built environment including biodiversity, landscape character, conservation areas, historic value and open space through positive improvement.
SSO13	Develop the Greengrid network of biodiversity sites, historic sites, green infrastructure and open spaces linking existing and new communities, the urban areas to countryside and access to the river. Provide new open spaces, improve the accessibility of existing open spaces and ensure safe connecting routes and corridors linking them.
SSO14	Promote sustainable development in Thurrock through the prudent use of water and other natural resources, sustainable design, methods and materials, and integration of land-use with the maximum re-use of land.
SSO15	To ensure an adequate supply of minerals by promoting the use of secondary and recycled aggregates; safeguarding sites for their importation; and by safeguarding and identifying resources for future extraction to maintain at least a seven year landbank of permitted reserves, whilst seeking to minimise the impact on the

DPD Objectives tested for compatibility in this document	
	environment.
SSO16	To achieve a reduction of waste at source through promotion of the waste hierarchy, whilst securing a sustainable network of waste facilities to provide self-sufficiency for Thurrock waste focused within the Thurrock Urban Area and a reduction of imported waste from London into the borough in accordance with regional apportionment.
SSO17	To minimise the impact of climate change by supporting the provision of renewable and low carbon energy sources in Thurrock and ensuring that new development incorporates climate change adaptation.
SSO18	To reduce and manage the risk of flooding to and from development through its location, layout and design.
SSO19	To safeguard and enhance the Thurrock riverside and coastal land for its various roles as a key asset of the borough: as a haven for wildlife, a cultural and heritage environment, providing for leisure and recreation and for port –related activity at Tilbury and London Gateway and provide land for flood risk management.