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Integrated Sustainability Appraisal of the Thurrock Local Plan: Issues and Options (Stage 2)

**Sustainability Appraisal report incorporating Health Impact
Assessment and Equalities Impact Assessment**

Prepared by LUC
December 2018

Project Title: Integrated Sustainability Appraisal of the Thurrock Local Plan

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1 Introduction

- 1.1 This Sustainability Appraisal Report has been prepared by LUC on behalf of Thurrock Council as part of the integrated Sustainability Appraisal (SA) and Strategic Environmental Assessment (SEA) of the Thurrock Local Plan. The assessment of the Local Plan also integrates Health Impact Assessment (HIA) and Equalities Impact Assessment (EqIA); the term 'SA' is used throughout this report to refer to the full integrated assessment.
- 1.2 This report relates to the Issues and Options (Stage 2) version of the Local Plan (December 2018) and it should be read in conjunction with that document.

Context for the Thurrock Local Plan

- 1.3 Thurrock is located on the north bank of the Thames, twenty miles east of central London. The Borough covers 165 sq. km and has a diverse range of land uses and associated environmental issues. More than half of the land in Thurrock is designated Green Belt and the Borough has over 18 miles of riverfront. There are a number of international, national and local biodiversity designations in Thurrock, including part of the Thames Estuary and Marshes SPA and Ramsar site in the south east of the Borough. There are also large areas of the Borough at risk of flooding, particularly in the south, which could pose a constraint and/or risk to development. In addition, Thurrock contains a number of heritage assets, including nationally and locally designated assets, as well as areas of interest for archaeology. Arguably the most well-known heritage assets in the borough are Tilbury Fort and Coalhouse Fort. Coalhouse Fort is within Coalhouse Fort Park, which is a popular destination for recreation in the Borough, although the fort itself is considered to be 'at risk' according to Historic England.
- 1.4 Much of the riverside area is highly urbanised with a mixture of industrial and residential development at the western and eastern ends of the Borough. Thurrock has a number of main settlements, including Grays, Stanford/Corringham, South Ockendon and Tilbury, together with a number of villages in the Green Belt. The more recently developed settlement of Chafford Hundred and the Lakeside Regional Shopping Centre are located west of Grays and east of the M25.
- 1.5 Thurrock is a key regeneration area in the East of England, lying within the Thames Gateway, and a major growth area, due to the availability of large areas of former industrial land for redevelopment, its proximity to London and its good transport links¹. There is considerable investment planned in Thurrock to support this growth, and the identification and allocation of suitable sites for development will help to direct this investment to where it can achieve the most benefit for Thurrock and its residents.

The Local Plan

- 1.6 Thurrock Council began work on its Local Plan under the previous Local Development Framework (LDF) system in 2005, which led to the adoption of the Thurrock Core Strategy and Policies for Management of Development (the Core Strategy) in December 2011, and subsequently the adoption of the Focused Review: Consistency with National Planning Policy Framework in 2015. The Core Strategy and the focused review together set out the spatial vision, strategy and planning policies for Thurrock up to and beyond 2026.

¹ Thurrock Council (2010) Thurrock Council Strategic Housing Land Availability Assessment: Final report [online] Available at: https://www.thurrock.gov.uk/sites/default/files/assets/documents/shlaa_volume1_2010.pdf

- 1.7 The Core Strategy is a statutory planning document that contains planning policies on topics such as housing, employment, green belt, community facilities, education and health, sports and leisure, open space, climate change, minerals and waste. It allocates only large sites for development considered pivotal for the future of Thurrock (i.e. of 'strategic importance'). It did not go as far as to allocate smaller sites, which were to be considered in subsequent, more detailed Local Plan documents.
- 1.8 Since the Core Strategy was adopted, there have been a number of significant changes to the planning system at a national, regional and local level, including those which have brought increased focus to housing delivery, such as the Housing White Paper². The implications of these for the Local Plan include:
- The need for a more up-to-date statutory planning framework to co-ordinate the delivery of the Council's ambitious growth strategy for Thurrock;
 - The revocation of the East of England Plan and the requirement for local planning authorities to undertake a fresh assessment of their future development needs;
 - The need for the Council to identify a deliverable five-year housing land supply and bring forward more sites for development to support economic growth;
 - A need to plan for the impact of the proposed Lower Thames Crossing; and
 - Legislative changes that affect the form, content and process for preparing a Local Plan.
- 1.9 In February 2014, Thurrock Council made the decision to begin work on preparing a new Local Plan for the Borough, which will replace the Core Strategy, take the above changes into account and progress with site-specific allocations.
- 1.10 Other previously proposed plans, including the Gypsy and Traveller Local Plan, will be combined into the new Local Plan.

Sustainability Appraisal and Strategic Environmental Assessment

- 1.11 Sustainability Appraisal is a statutory requirement of the Planning and Compulsory Purchase Act 2004. It is designed to ensure that the plan preparation process maximises the contribution that a plan makes to sustainable development and minimises any potential adverse impacts. The SA process involves appraising the likely social, environmental and economic effects of the policies and proposals within a plan from the outset of its development.
- 1.12 Strategic Environmental Assessment (SEA) is also a statutory assessment process, required under the SEA Directive³, transposed into UK law by the SEA Regulations (Statutory Instrument 2004, No 1633). The SEA Regulations require the formal assessment of plans and programmes which are likely to have significant effects on the environment and which set the framework for future consent of projects requiring Environmental Impact Assessment (EIA)⁴. The purpose of SEA, as defined in Article 1 of the SEA Directive, is *'to provide for a high level of protection of the environment and to contribute to the integration of environmental considerations into the preparation and adoption of plans...with a view to promoting sustainable development'*.
- 1.13 SEA and SA are separate processes but have similar aims and objectives. Simply put, SEA focuses on the likely environmental effects of a plan while SA includes a wider range of considerations, extending to social and economic impacts. National Planning Practice Guidance⁵ shows how it is possible to satisfy both requirements by undertaking a joint SA/SEA process, and to present an SA report that incorporates the requirements of the SEA Regulations. The SA/SEA of the Thurrock Local Plan is being undertaken using this integrated approach.
- 1.14 Local Plans are subject to Examination by an Inspector, on behalf of the Secretary of State. The purpose of this Examination is to assess whether the Local Plan has been prepared in line with the

² MHCLG (2017) Fixing Our Broken Housing Market

³ SEA Directive 2001/42/EC

⁴ Under EU Directives 85/337/EEC and 97/11/EC concerning EIA.

⁵ <http://planningguidance.planningportal.gov.uk/>

relevant legal requirements and whether it meets the 'tests of soundness' in the NPPF. This includes whether the plan has been subject to an SA that meets the requirements of the SEA Regulations. The SA can help to demonstrate that the tests of soundness have been met, including:

- **Justified** - an appropriate strategy, taking into account the reasonable alternatives, and based on proportionate evidence.
- **Consistent with national policy** – enabling the delivery of sustainable development in accordance with the policies in this framework [the NPPF].

Health Impact Assessment

1.15 Health Impact Assessment (HIA) is a means of assessing the likely health effects of plans, programmes and projects. In itself, it is not a statutory requirement, but in 2005 the Office of the Deputy Prime Minister (ODPM) published 'A Practical Guide to the Strategic Environmental Assessment Directive'⁶, which noted that:

"Responsible Authorities may find it helpful to draw on the methods of Health Impact Assessment when considering how a plan or programme might affect people's health."

1.16 The purpose of HIA is to assist decision-makers in understanding the health impacts of a plan. It seeks to inform and enhance the decision-making process, making decisions more holistic and robust by:

- highlighting practical ways to enhance the positive health, equality and well-being effects of a plan; and
- avoiding or reducing the negative health, equality and well-being effects.

1.17 While a separate HIA has not been completed for the Local Plan, relevant elements of the HIA process have been integrated into the SA, as demonstrated in **Table 1.1** below. The HIA topics are drawn from the NHS London Rapid Health Impact Assessment Tool⁷.

1.18 Health is a cross-cutting topic and helps to explain why many other topic areas are considered by the SA. For example, effects of the plan on air quality are assessed because of the implications for health (as well as for biodiversity). **Table 1.1** further demonstrates how health is relevant to other SA objectives.

Table 1.1: Integration of HIA topics in this SA

HIA topic	Relevant SA Objective
Housing quality and design	SA objective 13: Housing
Access to healthcare services and other social infrastructure	SA objective 16: Health and Wellbeing. Accessibility is also relevant to this topic (see below).
Access to open space and nature	SA objective 2: Biodiversity, Flora and Fauna SA objective 16: Health and Wellbeing
Air quality, noise and neighbourhood amenity	SA objective 1: Air Quality SA objective 7: Landscape, Townscape and Visual Impacts SA objective 9: Noise

⁶ Office of the Deputy Prime Minister (ODPM) (2005) A Practical Guide to the Strategic Environmental Assessment Directive [online] Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/7657/practicalguidesea.pdf

⁷ <http://www.healthyurbandevelopment.nhs.uk/ourservices/delivering-healthy-urban-development/health-impact-assessment/>

HIA topic	Relevant SA Objective
Accessibility and active travel	SA objective 16: Health and Wellbeing SA Objective 17: Access to Services and Facilities
Crime reduction and community safety	SA objective 14: Crime & safety
Access to healthy food	Access to healthy food is not addressed as it is not relevant to the local plan process. This issue should be addressed through other means.
Access to work and training	SA objective 11: Economy and Employment SA objective 12: Education and Skills
Social cohesion and lifetime neighbourhoods	SA objective 14: Crime & safety SA objective 15: Equalities. Housing and accessibility (see above) are also relevant to this topic.
Minimising the use of resources	SA objective 8: Materials and Waste
Climate change	SA objective 4: Climate change and energy SA objective 5: Flood Risk
Environmental quality	SA objective 6: Geology and soil SA objective 10: Water resources and quality

Equalities Impact Assessment

- 1.19 The requirement to undertake formal Equalities Impact Assessment (EqIA) of plans was introduced in the Equality Act 2010, but was abolished in 2012 as part of a Government bid to reduce bureaucracy. Despite this, authorities are still required to have regard to the provisions of the Equality Act, namely the Public Sector Duty which requires public authorities to have due regard for equalities considerations when exercising their functions. Public authorities must ensure that all decisions are made in such a way as to minimise unfairness, and do not have disproportionately negative effects on people because of their protected characteristics or background.
- 1.20 As Thurrock's new Local Plan will include policies, proposals and sites for future development which have the potential to affect a diverse range of social and demographic groups, the Council has decided that an Equalities Impact Assessment (EqIA) will be completed as part of the Sustainability Appraisal. The EqIA, which for the purpose of reporting is included as one of the SA topics, will consider how a project or policy may impact various groups, particularly with regards to different protected characteristics⁸ as defined in the Equality Act. This includes how the needs of these groups will be met and the impact of the plan on these groups, whether beneficial or otherwise. SA objective 15 relates specifically to equalities.

⁸ Protected characteristics are defined by the Equality Act 2010 as the following: age, disability, gender reassignment, marriage and civil partnership, pregnancy and maternity, race, religion or belief, sex, and sexual orientation.

Habitats Regulations Assessment

- 1.21 Under the Conservation of Habitats and Species Regulations 2017 (Habitats Regulations), land-use plans, including Development Plan Documents, are also subject to Habitats Regulations Assessment (HRA). The purpose of HRA is to assess the impacts of a land-use plan against the conservation objectives of a European site and to ascertain whether it would adversely affect the integrity of that site.
- 1.22 The HRA for the Thurrock Local Plan will be undertaken by LUC on behalf of the Council. An HRA Scoping and Discussion Document has been prepared, and screening for likely significant effects of the Local Plan will be undertaken once preferred options have been identified. While the HRA will be reported on separately to the SA, the findings will be taken into account in the SA where relevant (for example to inform judgements about the likely effects of the Local Plan on biodiversity).

Structure of this Report

- 1.23 This report is the SA report for the Thurrock Local Plan: Issues and Options (Stage 2). **Table 1.2** below signposts how the requirements of the SEA Regulations have been met within this report.

Table 1.2: Requirements of the SEA Regulations and where these have been addressed in this SA Report

SEA Regulations' Requirements	Where covered in this SA report
Environmental Report	
Where an environmental assessment is required by any provision of Part 2 of these Regulations, the responsible authority shall prepare, or secure the preparation of, an environmental report in accordance with paragraphs (2) and (3) of this regulation. The report shall identify, describe and evaluate the likely significant effects on the environment of: (a) implementing the plan or programme; and (b) reasonable alternatives taking into account the objectives and geographical scope of the plan or programme. (Regulation 12(1) and (2) and Schedule 2).	Chapters 4,5,6,7 and 8 and Appendices 6, 7 and 8.
a) An outline of the contents and main objectives of the plan or programme, and of its relationship with other relevant plans and programmes.	Chapter 1 provides an outline of the contents and main objectives of the Local Plan. Chapter 3 and Appendix 2 outline the Local Plan's relationship with other relevant plans and programmes.
b) The relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan or programme.	Chapter 3 and Appendix 3.
c) The environmental characteristics of areas likely to be significantly affected.	Chapter 3 and Appendix 3.
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 on the conservation of wild birds and the Habitats Directive.	Chapter 3.

SEA Regulations' Requirements	Where covered in this SA report
<p>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.</p>	<p>Appendix 2.</p>
<p>f) The likely significant effects on the environment, including short, medium and long-term effects, permanent and temporary effects, positive effects, and secondary, cumulative and synergistic effects, on issues such as:</p> <ul style="list-style-type: none"> (a) biodiversity; (b) population; (c) human health; (d) fauna; (e) flora; (f) soil; (g) water; (h) air; (i) climatic factors; (j) material assets; (k) cultural heritage, including architectural and archaeological heritage; (l) landscape; and (m) the interrelationship between the issues referred to in subparagraphs (a) to (l). 	<p>Chapters 4,5,6,7 and 8 and Appendices 6, 7 and 8.</p>
<p>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.</p>	<p>This requirement will be addressed once the Council has selected Preferred Options and worked these up in more detail.</p>
<p>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.</p>	<p>Chapter 2.</p>
<p>i) A description of the measures envisaged concerning monitoring in accordance with regulation 17.</p>	<p>This requirement will be addressed once the Council has selected Preferred Options and worked these up in more detail.</p>
<p>j) A non-technical summary of the information provided under paragraphs 1 to 9.</p>	<p>A separate non-technical summary document will be prepared for the SA Report to accompany consultation on the Proposed Submission version of the Local Plan.</p>
<p>The report shall include such of the information referred to in Schedule 2 to these Regulations as may reasonably be required, taking account of:</p> <ul style="list-style-type: none"> (a) current knowledge and methods of assessment; (b) the contents and level of detail in the plan or programme; the stage of the plan or programme in the decision-making process; and (c) the extent to which certain matters are more appropriately assessed at different levels in that process in order to avoid duplication of the assessment. <p>(Regulation 12 (3))</p>	<p>Addressed throughout this SA report.</p>

SEA Regulations' Requirements	Where covered in this SA report
Consultation	
<p>When deciding on the scope and level of detail of the information that must be included in the environmental report, the responsible authority shall consult the consultation bodies. (Regulation 12(5))</p>	<p>The SA Scoping Report was published for consultation with statutory consultees and the public from 26th February 2016 until 11th April 2016.</p>
<p>Every draft plan or programme for which an environmental report has been prepared in accordance with regulation 12 and its accompanying report ("the relevant documents") shall be made available for the purposes of consultation in accordance with the following provisions of this regulation. As soon as reasonable practical after the preparation of the relevant documents, the responsible authority shall:</p> <ul style="list-style-type: none"> (a) send a copy of those documents to each consultation body; (b) take such steps as it considers appropriate to bring the preparation of the relevant documents to the attention of the persons who, in the authority's opinion, are affected or likely to be affected by, or have an interest in the decisions involved in the assessment and adoption of the plan or programme concerned, required under the Environmental assessment of Plans and Programmes Directive ("the public consultees"); (c) inform the public consultees of the address (which may include a website) at which a copy of the relevant documents may be viewed, and the period within which, opinions must be sent. <p>The period referred to in paragraph (2) (d) must be of such length as will ensure that the consultation bodies and the public consultees are given an effective opportunity to express their opinion on the relevant documents. (Regulation 13 (1), (2), and (3))</p>	<p>This SA Report is being published for consultation from January 2019 to March 2019.</p>
<p>Where a responsible authority, other than the Secretary of State, is of the opinion that a plan or programme for which it is the responsible authority is likely to have significant effects on the environment of another Member State, it shall, as soon as reasonable practicable after forming that opinion:</p> <ul style="list-style-type: none"> (a) notify the Secretary of State of its opinion and of the reasons for it; and (b) supply the Secretary of State with a copy of the plan or programme concerned, and of the accompanying environmental report. <p>(Regulation 14 (1))</p>	<p>The Local Plan is unlikely to have a significant effect on another EU Member State.</p>
Taking the environmental report and the results of the consultations into account in decision-making (relevant extracts of Regulation 16)	
<p>As soon as reasonably practicable after the adoption of a plan or programme for which an environmental assessment has been carried out under these Regulations, the responsible authority shall:</p> <ul style="list-style-type: none"> (a) make a copy of the plan or programme and its accompanying environmental report available at its principal office for inspection by the public at all reasonable times and free of charge. <ul style="list-style-type: none"> • (Regulation 16(1)) 	<p>To be addressed after the Local Plan is adopted.</p>

SEA Regulations' Requirements	Where covered in this SA report
<p>As soon as reasonably practicable after the adoption of a plan or programme:</p> <p>(a) the responsible authority shall inform (i) the consultation bodies; (ii) the persons who, in relation to the plan or programme, were public consultees for the purposes of regulation 13; and (iii) where the responsible authority is not the Secretary of state, the Secretary of State,</p> <p>that the plan or programme has been adopted, and a statement containing the following particulars:</p> <p>(a) how environmental considerations have been integrated into the plan or programme;</p> <p>(b) how the environmental report has been taken into account;</p> <p>(c) how opinions expressed in response to: (i) the invitation in regulation 13(2)(d); (ii) action taken by the responsible authority in accordance with regulation 13(4), have been taken into account;</p> <p>(d) how the results of any consultations entered into under regulation 14(4) have been taken into account;</p> <p>(e) the reasons for choosing the plan or programme as adopted, in the light of the other reasonable alternatives dealt with; and</p> <p>(f) the measures that are to be taken to monitor the significant environmental effects of the implementation of the plan or programme.</p>	<p>To be addressed after the Local Plan is adopted.</p>
Monitoring	
<p>The responsible authority shall monitor the significant effects of the implementation of each plan or programme with the purpose of identifying unforeseen adverse effects at an early stage and being able to undertake appropriate remedial action. (Regulation 17(1))</p>	<p>To be addressed after the Local Plan is adopted.</p>

1.24 This section has introduced the SA process for the Thurrock Local Plan. The remainder of the report is structured into the following sections:

- **Chapter 2: Methodology** describes the approach that is being taken to the SA of the Local Plan and describes the difficulties encountered in carrying out the SA.
- **Chapter 3: Sustainability Context for Development in Thurrock** describes the relationship between the Thurrock Local Plan and other relevant plans, policies and programmes; summarises the social, economic and environmental characteristics of the district, identifies the key sustainability issues.
- **Chapter 4: Sustainability Appraisal Findings for the Vision, Objectives and Policy Principles** summarises the SA findings for the Local Plan Vision, Draft Strategic Objectives and Policy Principles presented in Section 3 of the Issues and Options (Stage 2) Local Plan.
- **Chapter 5: Sustainability Appraisal findings for the Level of Growth options - Housing** summarises the SA findings for the options presented in Section 4 of the Issues and Options (Stage 2) Local Plan, 'what level of growth is needed – housing?'
- **Chapter 6: Sustainability Appraisal findings for the Level of Growth options - Employment** summarises the SA findings for the options presented in Section 5 of the Issues and Options (Stage 2) Local Plan, 'what level of growth is needed – employment land?'
- **Chapter 7: Sustainability Appraisal findings for the Level of Growth options – Retail and Leisure** summarises the SA findings for the options presented in Section 6 of the Issues and Options (Stage 2) Local Plan, 'what level of growth is needed – retail and leisure?'
- **Chapter 8: Sustainability Appraisal findings for the Development Principles Options** summarises the SA findings for the options presented in Section 7 of the Issues and Options (Stage 2) Local Plan, 'development principles'.

- **Chapter 9: Conclusions** summarises the key findings from the SA of the Issues and Options (Stage 2) version of the Local Plan and describes the next steps to be undertaken.

1.25 The main body of the report is supported by a number of appendices as follows:

- **Appendix 1** presents the **consultation responses** that were received in relation to the SA Scoping Report and explains how each one has been addressed.
- **Appendix 2** presents the updated **review of relevant plans, policies and programmes** (this was originally presented in the SA Scoping Report).
- **Appendix 3** presents the updated **baseline information** for Thurrock (this was originally presented in the SA Scoping Report).
- **Appendix 4** presents the **assumptions** applied during the appraisal of site options.
- **Appendix 5** lists the questions contained in the Issues and Options (Stage 2) document and explains whether each one has related options that were subject to SA.
- **Appendix 6** presents the detailed SA matrices for the spatial options presented in Section 4 of the Issues and Options (Stage 2) Local Plan, 'what level of growth is needed – housing?'
- **Appendix 7** presents the detailed SA matrices for the Major Urban Extension options presented in Section 4 of the Issues and Options (Stage 2) document, 'what level of growth is needed – housing?'
- **Appendix 8** presents the detailed SA matrices for the employment allocation options presented in Section 5 of the Issues and Options (Stage 2) document, 'what level of growth is needed – employment land'.

2 Methodology

- 2.1 In addition to complying with legal requirements, the approach being taken to the SA of the Thurrock Local Plan is based on current best practice and the guidance on SA/SEA set out in the National Planning Practice Guidance, which involves carrying out SA as an integral part of the plan-making process. **Table 2.1** below sets out the main stages of the plan-making process and shows how these correspond to the SA process. For the purposes of this study, each stage of SA incorporates HIA and EqIA.

Table 2.1: Corresponding stages in plan making and SA

Local Plan Step 1: Evidence Gathering and engagement
SA stages and tasks
Stage A: Setting the context and objectives, establishing the baseline and deciding on the scope
<ul style="list-style-type: none"> • 1: Identifying other relevant policies, plans and programmes, and sustainability objectives • 2: Collecting baseline information • 3: Identifying sustainability issues and problems • 4: Developing the SA framework • 5: Consulting on the scope of the SA
Local Plan Step 2: Production
SA stages and tasks
Stage B: Developing and refining options and assessing effects
<ul style="list-style-type: none"> • 1: Testing the Local Plan objectives against the SA framework • 2: Developing the Local Plan options • 3: Evaluating the effects of the Local Plan • 4: Considering ways of mitigating adverse effects and maximising beneficial effects • 5: Proposing measures to monitor the significant effects of implementing the Local Plan
Stage C: Preparing the Sustainability Appraisal Report
<ul style="list-style-type: none"> • 1: Preparing the SA Report
Stage D: Seek representations on the Local Plan and the Sustainability Appraisal Report
<ul style="list-style-type: none"> • 1: Public participation on Local Plan and the SA Report • 2(i): Appraising significant changes
Local Plan Step 3: Examination
SA stages and tasks
<ul style="list-style-type: none"> • 2(ii): Appraising significant changes resulting from representations
Local Plan Step 4 & 5: Adoption and Monitoring
SA stages and tasks
<ul style="list-style-type: none"> • 3: Making decisions and providing information
Stage E: Monitoring the significant effects of implementing the Local Plan
<ul style="list-style-type: none"> • 1: Finalising aims and methods for monitoring • 2: Responding to adverse effects

- 2.2 The sections below describe the approach that has been taken to the SA of the Thurrock Local Plan to date and provide information on the subsequent stages of the process.

Stage A: Scoping

- 2.1 The SA process began with the production of a Scoping Report for the Thurrock Local Plan which was prepared by Thurrock Council in December 2016. This was reviewed by LUC in January 2017, resulting in changes to the SA Framework in order to reflect examples of best practice, streamline it and to ensure the appraisal questions were appropriate and took into account comments

received on the SA Scoping Report. The final version of the SA Framework is included in **Table 2.2** below. Generally, the changes consist of clarified wording and additional appraisal guide questions, rather than changes to the SA objectives themselves. The updates to the objectives consist primarily of merging objectives. The only deletion is of the deprivation topic, as it is considered that is adequately addressed through other objectives, which relate to specific types of deprivation. SA objectives have been numbered for ease of reference.

- 2.2 This review also resulted in changes to the Site Assessment Methodology (Table 6-4 of the Scoping Report). These changes included removing the 'showstopper' criteria, as it is considered that such effects would render an option unreasonable and therefore such options need not be subject to SA. The criteria have also been amended to take account of the comments received as part of the consultation on the SA Scoping report, as well as taking account of the data that is available to inform the assessments and reduce subjectivity of the assessments. The amended Site Assessment Methodology is presented in **Appendix 4**.
- 2.3 The Scoping stage of the SA involves understanding the social, economic and environmental baseline for the Plan area as well as the sustainability policy context and key sustainability issues. The Scoping Report presented the outputs of the following tasks:
- Policies, plans and programmes and their objectives of relevance to the Local Plan were identified and the relationships between them were considered, enabling any potential synergies to be exploited and any potential inconsistencies and incompatibilities to be identified and addressed.
 - Baseline information was collected on environmental, social and economic issues in Thurrock. This baseline information provides the basis for predicting and monitoring the likely effects of options for policies and site allocations and helps to identify alternative ways of dealing with any adverse effects identified.
 - Key sustainability issues for Thurrock were identified and their likely evolution without the implementation of the Local Plan was considered.
 - A SA framework was presented, comprising a set of sustainability objectives that define the long-term aspirations of the district with regard to social, economic and environmental considerations. The SA objectives were informed by the previously identified sustainability issues and policy objectives. During the SA, the performances of the plan options are assessed in terms of their ability to contribute to the achievement of these SA objectives. This provides a consistent and transparent basis for assessing the sustainability performance of the emerging plan components.
- 2.4 Public and stakeholder participation is an important part of the SA and wider plan-making processes. It helps to ensure that the SA report is robust and has due regard to all appropriate information that will support the plan in making a contribution to sustainable development. The SA Scoping Report for the Local Plan was published for consultation between February and April 2016 with the three statutory consultees (Natural England, the Environment Agency and Historic England) and other interested parties.
- 2.5 **Appendix 1** details the comments that were received during the consultation on the SA Scoping Report and describes how each one has been addressed during the preparation of this SA report. In light of the comments received a number of amendments were made to the information contained in the Scoping Report. The review of plans, policies and programmes, the baseline information and the key sustainability issues will continue to be reviewed at each stage of the SA process to ensure that they remain up to date. The updated versions of the review of plans, policies and programmes and the baseline information are presented in **Appendices 2 and 3** respectively of this report and are summarised in **Chapter 3**.
- 2.6 **Table 2.2** presents the amended SA framework for the Thurrock Local Plan which now includes 17 SA objectives. The table also shows how all of the topics required by the SEA Regulations have been covered by the SA objectives.

Table 2.2: SA framework for the Thurrock Local Plan

#	Topic	SA Objective	Appraisal guide questions Will the policy / proposal / site...	SEA topic (Annex 1(f) of SEA Directive)
1	Air Quality	Improve air quality by reducing concentrations of harmful atmospheric pollutants and avoiding their emission	Improve air quality; reducing pollutant emissions from all sources? Avoid or reduce emissions of NO _x and PM from transport?	Air Human health
2	Biodiversity, Flora and Fauna	Conserve and enhance Thurrock's biodiversity, including all statutory and non-statutory designated sites, notable and protected habitats and species	Conserve or enhance biodiversity; avoiding harm to or loss of statutory and non-statutory designated wildlife sites and expanding and improving these, where possible? Maintain and enhance habitats and species in line with Borough and national targets? Ensure no net loss of biodiversity? Encourage creation, management and enhancement of green infrastructure? Help the local community to interact with the natural environment and wildlife?	Biodiversity Flora Fauna Human health
3	Climate Change and Energy	Reduce greenhouse gas emissions and encourage transition to renewable energy	Reduce energy consumption and greenhouse gas emissions? Avoid or reduce greenhouse gas emissions from transport? Encourage up-take of renewable energy sources and low carbon technologies? Encourage a modal shift to sustainable modes of transport?	Climatic factors Human health
4	Historic Environment	Conserve and enhance the Borough's cultural heritage and historic assets and their	Conserve and enhance the Borough's historic assets and heritage? Enable more people to access, understand and enjoy the Borough's historic assets and heritage?	Cultural heritage, including architectural and archaeological heritage

#	Topic	SA Objective	Appraisal guide questions Will the policy / proposal / site...	SEA topic (Annex 1(f) of SEA Directive)
		settings		
5	Flood Risk	Reduce the risk and effects of flooding, both now and in the future	Reduce the likelihood and impact of surface, groundwater, fluvial and tidal flooding on people and property? Encourage creation, management and enhancement of green infrastructure?	Climatic factors Water Human health
6	Geology and Soils	Conserve and enhance Thurrock's geodiversity and soil resources	Conserve or enhance the Borough's geological sites? Help to maintain Thurrock's soil resources? Minimise loss of best and most versatile agricultural land? Avoid or remediate contaminated land?	Soil Human health
7	Landscape, Townscape and Visual Impacts	Maintain and enhance Thurrock's landscape and townscape, ensuring development does not detract from the quality of views and local distinctiveness	Improve the attractiveness of built-up areas; avoiding incongruent development? Contribute positively to the landscape/ townscape and the Borough's character; avoiding inappropriate development in sensitive areas? Maintain and enhance landscape character areas identified in the Thurrock Integrated Landscape Character Assessment and Sensitivity Evaluation (2016)? Avoid or reduce light pollution? Improve the aesthetic appeal of public open spaces?	Landscape Human health
8	Materials and Waste	Use resources intelligently, optimising reuse and recovery to keep waste to a minimum	Avoid sterilisation of mineral resources? Minimise the production of waste? Help to avoid or reduce waste sent to landfill; promoting reuse and recovery? Reduce the distance waste travels; minimising imports and exports?	Material assets Human health
9	Noise	Avoid or reduce the impacts of noise	Reduce noise and disturbance to people and wildlife?	Population

#	Topic	SA Objective	Appraisal guide questions Will the policy / proposal / site...	SEA topic (Annex 1(f) of SEA Directive)
		pollution on residents and wildlife	Avoid or reduce transport-related noise pollution?	Fauna Human health
10	Water Resources and Quality	Ensure that water supply can support future development and preserve and enhance the quality of waterbodies and groundwater	Maintain or improve the quality of waterbodies and groundwater? Ease pressure on existing sources; reducing water consumption and abstraction? Increase water resource capacity that is resilient to climate change?	Water Human health
11	Economy and Employment	Create a prosperous, growing economy founded on high rates of employment and investment	Support the creation of new jobs and maintenance of existing ones? Enable access to employment opportunities, particularly for disadvantaged groups and deprived areas? Facilitate the growth of small and medium size businesses? Help to attract inwards investment? Diversify the local economy; reducing the burden on core sectors? Encourage new business start-ups and social enterprises?	Material assets Human health
12	Education and Skills	Provide opportunities for high-quality education and skills development to allow everyone to achieve their potential	Provide education and skills development opportunities; particularly in deprived areas and accessible to all social groups? Provide or maintain jobs of varying skill levels? Encourage innovation and entrepreneurship? Increase the number and capacity of local education and training facilities?	Material assets Human health
13	Housing	Provide new and affordable housing to meet identified needs	Increase the availability of housing; particularly housing that is affordable? Provide housing which meets locally identified needs (i.e.in terms of type, tenure and size)?	Material assets Population Human health

#	Topic	SA Objective	Appraisal guide questions Will the policy / proposal / site...	SEA topic (Annex 1(f) of SEA Directive)
			<p>Seek to meet the criteria of the Lifetime Homes Standard?</p> <p>Address the housing needs of older people e.g. extra care housing or sheltered housing?</p> <p>Include housing that can be adapted to support independent living for disabled people?</p> <p>Promote good design through layout, orientation and internal space standards?</p> <p>Increase provision of affordable housing for vulnerable groups, those with chronic medical conditions and for the homeless?</p> <p>Improve energy efficiency of homes or ensure new homes are of high energy efficiency?</p> <p>Result in diverse forms and types of housing?</p> <p>Ensure housing is high quality, with minimal hazards?</p>	
14	Crime & safety	Reduce crime, antisocial behaviour and fear of crime and improve safety	<p>Reduce crime rates, antisocial behaviour or fear of crime?</p> <p>Reduce congestion and improve the flow of traffic?</p> <p>Provide services or facilities to help improve transport safety?</p> <p>Improve the public realm, including lighting and general environmental improvements?</p> <p>Result in mixed land uses and/or provision of affordable housing?</p> <p>Improve road safety e.g. through traffic calming measures or better lighting?</p>	<p>Population</p> <p>Human health</p>
15	Equalities	Advance equality of opportunity and foster good relations between those who share a protected characteristic (Equality Act 2010) and those	<p>Remove or reduce disadvantages suffered by people due to their protected characteristics?</p> <p>Encourage public participation in decision-making by people with protected characteristics?</p> <p>Promote community cohesion?</p>	<p>Population</p> <p>Human health</p>

#	Topic	SA Objective	Appraisal guide questions Will the policy / proposal / site...	SEA topic (Annex 1(f) of SEA Directive)
		who do not.	Help meet the needs of people with certain protected characteristics (i.e. age, disability, gender reassignment, marriage and civil partnership, pregnancy and maternity, race, religion or belief, sex, and sexual orientation.)?	
16	Health and wellbeing	Create a healthy living environment and encourage healthy lifestyles.	<p>Help to improve the physical and mental health of the population?</p> <p>Facilitate access to health and recreation facilities for all, including improving access to and quality of facilities in deprived areas?</p> <p>Avoid or reduce emissions of pollutants harmful to health; including air pollutants, noise and contamination of land and water?</p> <p>Encourage active travel; providing high quality and attractive infrastructure?</p> <p>Encourage or enable people to be physically active, helping to tackle related health issues, such as adult and child obesity?</p> <p>Improve availability of high quality publically accessible green space and recreational resources?</p> <p>Encourage creation, management and enhancement of green infrastructure?</p> <p>Improve the aesthetics of public open space?</p> <p>Increase access to healthier food options and decrease access to unhealthy food options?</p> <p>Encourage more connected neighbourhoods with mixed land uses?</p> <p>Enhance opportunities for the local communities to access nature, including urban green space?</p>	Human health Population
17	Access to Services and Facilities	Ensure adequate access to services and facilities for all	<p>Enable the local community to access the services and facilities they need?</p> <p>Ensure capacity of services and facilities is in line with local needs?</p>	Material assets Climatic factors Human health

#	Topic	SA Objective	Appraisal guide questions Will the policy / proposal / site...	SEA topic (Annex 1(f) of SEA Directive)
			Improve the quality of services and facilities offered? Help to retain key village services? Encourage more connected neighbourhoods?	

SA Stage B: Developing and refining options and assessing effects

- 2.7 Developing options for a plan is an iterative process, usually involving a number of consultations with public and stakeholders. Consultation responses and the SA can help to identify where there may be other 'reasonable alternatives' to the options being considered for a plan.
- 2.8 Regulation 12 (2) of the SEA Regulations requires that:
"The [environmental or SA] report must identify, describe and evaluate the likely significant effects on the environment of—
(a) implementing the plan or programme; and
(b) reasonable alternatives, taking into account the objectives and the geographical scope of the plan or programme."
- 2.9 Any alternatives considered for the plan need to be 'reasonable'. This implies that alternatives that are not reasonable do not need to be subject to appraisal. Examples of unreasonable alternatives include policy options that do not meet the objectives of the plan or national policy (e.g. the National Planning Policy Framework) or site options that are unavailable or undeliverable.
- 2.10 The SA findings are not the only factors taken into account when determining a preferred option to take forward in a plan. There will often be an equal number of positive or negative effects identified for each option, such that it is not possible to 'rank' them based on sustainability performance in order to select a preferred option. Factors such as public opinion, deliverability and conformity with national policy will also be taken into account by plan-makers when selecting preferred options for their plan.
- 2.11 This section provides an overview of the Council's reasons for selecting the alternatives dealt with by the SA, how the appraisal of options has been undertaken, and how this will feed into the development of the Thurrock Local Plan.

Issues and Options (Stage 1) (February 2016)

- 2.12 In February 2016 the Council published an Issues and Options (Stage 1) Local Plan consultation document, setting out how the Local Plan would be prepared and what information would be used to inform the plan. This gave stakeholders and other interested parties a chance to comment on what they would like to see in the Local Plan, both in terms of a vision for the future of Thurrock and in relation to a number of key policy areas, including new homes, job creation and healthy and active communities. This document did not present any options *per se*, rather it asked open-ended and high-level questions about what consultees would like to see in the plan. As such, the document was not subject to SA.

Issues and Options (Stage 2) (December 2018)

- 2.13 High level options for the Local Plan were identified by the Council officers preparing the Plan. Reasonable alternative options for various policy topics were drawn from the most up-to-date evidence and guided by the national level policy set out in the NPPF. For some of the Local Plan content proposed in the Issues and Options (Stage 2) Local Plan, such as the Vision and Strategic Objectives, no reasonable alternatives were identified because these were developed with consideration for the key issues in the area and responses from the Issues and Options (Stage 2) consultation. For other aspects of the Local Plan, no reasonable alternatives were identified because any other approach would be contrary to national policy. While the specific wording for these aspects of the Local Plan could change, national Planning Practice Guidance states that reasonable alternatives '*must be sufficiently distinct to highlight the different sustainability implications of each*⁹.

⁹ Reference ID: 11-018-20140306

- 2.14 The high level options presented within the Issues and Options (Stage 2) have been subject to SA in accordance with the methodology described later in this chapter, and the findings are summarised in **Chapters 4 to 8**, which also include information about how the Council identified the options set out in the Issues and Options document. The detailed appraisal matrices for the plan options can be found in **Appendices 6 to 8**.
- 2.15 Once the Council has produced the next iteration of the Local Plan, the more detailed draft policies and proposed site allocations will also be subject to SA and the findings presented in an updated SA report.

SA Stage C: Preparing the Sustainability Appraisal Report

- 2.16 This SA Report describes the process that has been undertaken to date in carrying out the SA of Thurrock Local Plan. It sets out the findings of the appraisal of options presented in the Issues and Options (Stage 2) Local Plan, highlighting any likely significant effects (both positive and negative) and making recommendations for the Local Plan, where appropriate.

SA Stage D: Consultation on Local Plan and this SA Report

- 2.17 Thurrock Council is inviting comments on the Issues and Options (Stage 2) Local Plan and this SA Report. Both documents are being consulted on until 8th March 2019.
- 2.18 **Appendix 1** presents the consultation comments that were received in relation to the SA Scoping Report and explains how they have been addressed. Information about the consultation responses received in relation to this SA report and how they have been addressed will be provided in the SA report at the next stage of Local Plan preparation.

SA Stage E: Monitoring implementation of the Local Plan

- 2.19 As the Issues and Options presented at this stage are high level, and no preferred options have been selected, the plan does not have sufficient detail or certainty for the SA to propose recommendations for monitoring the social, environmental and economic effects of implementation at this stage. Future iterations of the SA will include recommendations for monitoring the likely significant effects of the Local Plan, once preferred options have been identified.

Appraisal Methodology

- 2.20 High-level reasonable alternative options for the Local Plan set out in the Issues and Options (Stage 2) document have been appraised against the SA objectives in the SA framework (see **Table 2.2** earlier in this section), with scores being attributed to each option to indicate its likely effects in relation to the achievement of each sustainability objective as follows:

Figure 2.1: Key to symbols and colour coding used in the SA of Thurrock’s Local Plan

++	The option is likely to have a significant positive effect in relation to achievement of the SA objective(s).
+	The option is likely to have a minor positive effect in relation to achievement of the SA objective(s).
0	The option is likely to have a negligible or no effect in relation to achievement of the SA objective(s).
-	The option is likely to have a minor negative effect in relation to achievement of the SA objective(s).
--	The option is likely to have a significant negative effect in relation to achievement of the SA objective(s).
?	It is uncertain what effect the option will have in relation to achievement of the SA objective(s).
+/- or ++/--	The option is likely to have an equal mixture of both minor or both significant positive and negative effects in relation to achievement of the SA objective(s).

- 2.21 Where a potential positive or negative effect is uncertain, a question mark was added to the relevant score (e.g. +? or -?) and the score is colour coded as per the potential positive, negligible or negative score (e.g. green, yellow, orange, etc.).
- 2.22 The likely effects of options need to be determined and their significance assessed, which inevitably requires a series of judgments to be made. This appraisal has attempted to differentiate between the most significant effects and other more minor effects through the use of the symbols shown above. The dividing line in making a decision about the significance of an effect is often quite small. Where either (++) or (--) has been used to distinguish significant effects from more minor effects (+ or -) this is because the effect of an option in relation to achievement of the SA objective in question is considered to be of such magnitude that it will have a noticeable and measurable effect, taking into account other factors that may influence the achievement of that objective. However, scores are relative to the scale of proposals under consideration.
- 2.23 The SA does not make recommendations regarding which options to take forward, as the SA is only one of many factors taken into account by the Council in decision-making. In addition, this SA considers each policy area on its own merits and cannot identify any cumulative effects, including mitigation that could be provided by other policy areas, until preferred options have been identified. As such, cumulative effects will be assessed at the next stage of SA. Nevertheless, conclusions and recommendations have been set out for each sub-section to identify if any options clearly perform better or worse than others (if applicable) and to set out potential policy considerations.

Site appraisal methodology

- 2.24 SA inevitably relies on an element of subjective judgement. However, in order to provide consistency and transparency in the appraisal of the site options, a detailed site appraisal methodology was developed to give guidance on the circumstances under which each of the scores presented in **Figure 2.1** should be applied. This site appraisal methodology is presented in **Appendix 4** and is applied mainly through the use of Geographical Information Systems (GIS) data. Note that this does not include criteria for when scores should be uncertain (?), this remaining a matter of judgement.
- 2.25 The site appraisal methodology was originally presented in the SA Scoping Report. A number of changes have been made to it since then to take account of changes in the GIS datasets available and to ensure that the assumptions are as robust as possible.
- 2.26 While the Issues and Options (Stage 2) document does not include any specific site allocation options, it does include broad location options for development in Section 4. While the site appraisal methodology was used as a guide in assessing these broad locations, professional judgement was applied to ensure that assessments reflected the large scale and approximate

location of these options, as well as information within the Local Plan about what is likely to be provided.

Difficulties encountered

- 2.27 It is a requirement of the SEA Regulations that the SA Report describes any data limitations or other difficulties that are encountered during the SA process. During the appraisal of the Issues and Options (Stage 2) document, the fact that options had not yet been worked up in detail (comprising only suggested approaches) meant that at times it was more difficult to assess the likely effects of the options. Once the draft policies have been worked up in more detail it should be possible to draw more certain conclusions about their likely effects.
- 2.28 Similarly, not all questions and policy areas set out in the Issues and Options (Stage 2) document could be subject to SA, as many were open-ended questions with no specific options that could be assessed. **Appendix 5** sets out which options have been subject to SA and why.
- 2.29 Section 4 of the Issues and Option (Stage 2) document presents a number of spatial options, which were subject to SA. This includes identification of broad locations that may be suitable for development. Due to the high level nature of these options, specific development boundaries are not available. There is therefore some uncertainty as to exactly where within these broad locations development would come forward. This uncertainty has been reflected in the assessments in **Chapter 5** and **Appendices 6 to 8**. Similarly, there is some uncertainty as to the level of infrastructure each of these options would provide. The Council has confirmed that more work is needed to understand this. In order to ensure that this is considered consistently between all options, the SA at this stage has applied the following assumptions:
- Allocated housing sites with a capacity of at least 700 new dwellings are assumed to incorporate a new primary school and a bus stop.
 - Allocated housing sites with a capacity of at least 3,000 new dwellings are assumed to incorporate at least one new primary school, a new secondary school, a bus stop, plus an appropriate level of community facilities, including publicly-accessible green space.
- 2.30 Where such assumptions have been made regarding the provision of new services and facilities, it has been assumed that these will be of an appropriate scale and appropriately located to meet the needs of the new development.
- 2.31 SA3 relates to climate change and energy. The Local Plan will include provision for a significant number of new homes over the plan period. Most new households are likely to own at least one car or van (or other motor vehicle) and therefore development through the Local Plan will inevitably result in an increase in greenhouse gas emissions. Greenhouse gas emissions will also increase as a result of supplying heating and electricity to new homes and businesses. When assessing spatial options, in order to provide a meaningful assessment of effects on SA3: Climate change & energy that allow the relative merits of options to be compared, the SA focuses on the availability of public transport as a proxy for the need for residents to travel by car. In this way, the positive effects of development within proximity to existing services and facilities or in proximity to sustainable transport links can be compared.
- 2.32 In assessing SA7: Landscape, Townscape and Visual Impacts, LUC drew on the draft Thurrock Integrated Landscape Character Assessment. A draft of this report was completed in 2018 but has not yet been published and is therefore still subject to change.

3 Sustainability context for development in Thurrock

Review of plans, policies and programmes

- 3.1 The Thurrock Local Plan is not prepared in isolation, being greatly influenced by other plans, policies and programmes and the sustainability objectives they contain. The Local Plan needs to be consistent with international and national guidance and strategic planning policies and should contribute to the goals of a wide range of other programmes and strategies, such as those relating to social policy, culture and heritage. It must also conform to environmental protection legislation and the sustainability objectives established at an international, national and regional level.
- 3.2 During the Scoping stage of the SA, a review was undertaken of the other plans, policies and programmes that are relevant to the Local Plan, as described in **Chapter 2**. The updated policy review can be seen in full in **Appendix 2** and the key findings are summarised below.
- 3.3 Schedule 2 to the SEA Regulations requires the SA to report on:
- (a) *“an outline of the...relationship with other relevant plans or programmes”*; and
 - (e) *“the environmental protection objectives established at international, Community or Member State level, which are relevant to the plan and the way those objectives and any environmental considerations have been taken into account during its preparation”*
- 3.4 It is necessary to identify the relationships between the Thurrock Local Plan and other relevant plans, policies and programmes so that any potential links can be built upon and any inconsistencies and constraints addressed.

Key international plans, policies and programmes

- 3.5 At the international level, Directive 2001/42/EC on the assessment of the effects of certain plans and programmes on the environment (the 'SEA Directive') and Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (the 'Habitats Directive') are particularly significant as they require Strategic Environmental Assessment (SEA) and Habitats Regulations Assessment (HRA) to be undertaken in relation to the emerging Local Plan. These processes should be undertaken iteratively and integrated into the production of the plan in order to ensure that any potential negative environmental effects (including on European-level nature conservation designations) are identified and can be mitigated.
- 3.6 There are a wide range of other EU Directives relating to issues such as water quality, waste and air quality, most of which have been transposed into UK law through national-level policy; however the international directives have been included in **Appendix 2** for completeness.
- 3.7 The Scoping Report also identifies the European Territorial Agenda of the EU (2011), the Århus Convention (2005) and UK Environmental Information Regulations (2004) as key international policy.

Key national plans, policies and programmes

- 3.8 The most significant development in terms of the policy context for the Thurrock Local Plan has been the publication of the National Planning Policy Framework (NPPF) which replaced the suite of Planning Policy Statements and Planning Policy Guidance. The purpose of the NPPF was to streamline national planning policy, reducing over a thousand pages of policy down to around 60 pages. The Local Plan must be consistent with the requirements of the NPPF. The NPPF sets out information about the purposes of local plan-making, stating that:

"Succinct and up-to-date plans should provide a positive vision for the future of each area; a framework for addressing housing needs and other economic, social and environmental priorities; and a platform for local people to shape their surroundings."

- 3.9 The NPPF also requires Local Plans to be 'aspirational but deliverable'. This means that opportunities for appropriate development should be identified in order to achieve net gains in terms of sustainable social, environmental and economic development; however significant adverse impacts in any of those areas should not be allowed to occur.
- 3.10 The NPPF requires local planning authorities to set out the strategic priorities for the area in the Local Plan. This should include strategic policies to deliver:
- Housing (including affordable housing), employment, retail, leisure and other commercial development.
 - Infrastructure for transport, telecommunications, security, waste management, water supply, wastewater, flood risk and coastal change management, and the provision of minerals and energy (including heat).
 - Community facilities (such as health, education and cultural infrastructure).
 - Conservation and enhancement of the natural, built and historic environment, including landscapes and green infrastructure, and planning measures to address climate change mitigation and adaptation.
- 3.11 In addition, Local Plans should:
- Be prepared with the objective of contributing to the achievement of sustainable development.
 - Be prepared positively, in a way that is aspirational but deliverable.
 - Be shaped by early, proportionate and effective engagement between plan-makers and communities, local organisations, businesses, infrastructure providers and operators and statutory consultees.
 - Contain policies that are clearly written and unambiguous, so it is evident how a decision maker should react to development proposals.
 - Be accessible through the use of digital tools to assist public involvement and policy presentation.
 - Serve a clear purpose, avoiding unnecessary duplication of policies that apply to a particular area.
- 3.12 The Scoping Report also identifies the Localism Act (2011) and the UK Sustainable Development Strategy (2005) as key national policy. In addition, the Housing White Paper (2017) made it clear that housing delivery needs to be boosted and should be a focus for planning.

Regional plans, policies and programmes

- 3.13 The Regional Spatial Strategy for the East of England, which covered Essex (including Thurrock), was revoked on January 3rd 2013. It is no longer part of the development plan as defined by Section 38(3) of the Planning and Compulsory Purchase Act 2004. Instead development is guided by national policy and Local Development Plans.
- 3.14 The South East Local Enterprise Partnership (LEP) is the business-led, public/private body established to drive economic growth across East Sussex, Essex, Kent, Medway, Southend and Thurrock. The partnership has produced a Strategic Economic Plan, which outlines the opportunities and challenges across the South East LEP area, and sets out its approach to creating growth. This includes focusing investment on key regions, sectors and infrastructure such as ports, roads and rail.

Local plans, policies and programmes

- 3.15 Thurrock Council, along with five other South Essex local authorities, is in the early stages of preparing a statutory Joint Spatial Plan for the sub-region.

- 3.16 In addition, there are a wide range of other sub-regional and local level plans and programmes that are relevant to Thurrock, and which provide further context for the emerging Local Plan. These plans and programmes relate to issues such as housing, transport, renewable energy and green and blue infrastructure, and have also been reviewed in **Appendix 2**.
- 3.17 Thurrock's adopted Core Strategy (2011) contains objectives and policies covering a range of spatial development issues in relation to education, health, community safety, sustainable development, climate change, energy and flood management, housing, employment, sport and leisure, community facilities and the natural and historic environment. This was reviewed in 2015 to amend a number of policies to accord with current governmental advice and the NPPF. The Core Strategy will remain in effect until it is replaced by the emerging Local Plan.
- 3.18 An emerging Site Specific Allocations and Policies Local Plan set out site allocation for new development in Thurrock, together with area-based policies. The plan was prepared to support the delivery of the adopted Core Strategy; however, on 12 Feb 2014 Thurrock's cabinet authorised the preparation of a new Local Plan for Thurrock. Work undertaken for the Site Specific Allocations and Policies Local Plan, including representations received on individual sites, is being carried forward and incorporated into the emerging Local Plan

Baseline information

- 3.19 Baseline information provides the context for assessing the sustainability of proposals in the Thurrock Local Plan and the basis for identifying trends, predicting the likely effects of the plan and monitoring its outcomes. There are no specific requirements regarding what baseline data needs to be collected, but it must be relevant to environmental, social and economic issues, be sensitive to change and should ideally relate to records which are sufficient to identify trends.
- 3.20 Schedule 2 of the SEA Regulations requires data to be gathered on biodiversity, population, human health, flora, fauna, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the inter-relationship between these factors. As an integrated SA and SEA is being carried out, baseline information relating to other sustainability topics has also been included, for example information about housing, education, transport, energy, waste and economic growth. The updated baseline information is presented in **Appendix 3**.

Key sustainability issues

- 3.21 A set of key sustainability issues for Thurrock was identified during the Scoping stage of the SA and was presented in the SA Scoping Report. These are presented below and have been updated, where applicable, to reflect the most up to date information.
- 3.22 **Air quality** – Air quality is a prominent issue in Thurrock. The Borough currently has 18 Air Quality Management Areas, all of which have been designated for road transport pollutant emissions. While data have shown gradual declines in pollutant concentrations over recent years, reductions have slowed, and proposed future development such as the Lower Thames Crossing could create new air quality issues.
- 3.23 **Biodiversity, flora and fauna** – Thurrock has a diverse range of internationally, nationally and locally important sites for nature conservation, as well as areas of ancient woodland and protected and/or notable habitats and species. Biodiversity in the wider context is suffering long-term declines. Thurrock Council has a duty to conserve and enhance biodiversity, which also benefits residents and visitors to the Borough, providing opportunities to interact with nature. This can have positive health and well-being effects.
- 3.24 **Climate Change and energy** – Thurrock's emissions of CO₂ have fallen in recent years, largely as a result of the closure of industry and transition towards a service-based economy. While this has been positive from a climate change and energy perspective, per capita emissions remain higher than regional and national averages, especially from transport sources. Further work will

be needed to promote low-carbon forms of energy and sustainable transport modes. Development of the Lower Thames Crossing could have wider impacts on travel patterns in the Borough, and is likely to bring more traffic through the Borough, therefore increasing associated carbon emissions.

- 3.25 **Cultural heritage** – The Borough has a rich portfolio of cultural heritage, including seven conservation areas, 244 Listed Buildings and 17 Scheduled Monuments. Such historic assets should be protected for the enjoyment of local residents, to preserve the cultural identity of local communities, and to attract new visitors to Thurrock.
- 3.26 **Flood risk** – Large swathes of the Borough’s built-up area are subject to flood risk, including Flood Zone two and Flood Zone three, particularly parts of the urban areas near the River Thames and River Mardyke. The number of properties estimated to be at risk of tidal flooding stands at over 11,000, while for fluvial flooding it is several hundred. Development should ensure it does not increase flood risk, particularly in high risk areas.
- 3.27 **Geology and soils** – Thurrock has three Sites of Special Scientific Interest (SSSIs) designated for geology and considerable areas of the ‘best and most versatile’ agricultural soils. Development should avoid degrading the Borough’s geological resources and, where possible, avoid building on or degrading the highest quality soil resources. It is important to recognise that maintaining an area’s soil resources must be carefully balanced against the economic viability of developing the land.
- 3.28 **Landscape, townscape and visual impacts** – Development has the potential to greatly influence the landscape or townscape of an area. Major developments such as new roads, residential expansion and employment hubs can have not only a physical impact, which affects views, but a wider impact on the environment through changing travel patterns, increasing noise, air and water pollution and encouraging population growth. Such changes can affect the character of local areas, particularly areas which are sensitive to particular types of development, and may have associated health impacts.
- 3.29 **Minerals and waste** – With the closure of many of the Borough’s mineral extraction sites and their subsequent conversion to other uses such as nature sites and green space, minerals required for construction are likely to be increasingly imported to the Borough from elsewhere. The environmental impacts of this transport should be considered in spatial planning, and every effort should be made to reuse existing materials in new developments. This can also help to reduce waste arisings from demolition that would otherwise require treatment or disposal. The London Plan emphasises reducing the amount of waste arisings in London in the first place and managing as much of London’s waste within its own boundaries as possible, therefore minimising the amount of waste transported for management outside the city to locations such as Thurrock. This means the Borough is likely to have greater capacity to manage its own waste in the future.
- 3.30 **Noise** – There are clear links between development and noise. Sources of noise, including major transport corridors, should be located or designed in a way that does not cause major adverse effects on the local population or wildlife. This is particularly important for quiet rural communities and areas on the urban fringe.
- 3.31 **Water resources and quality** – Pressure on water resources has been an ongoing issue in Thurrock for a number of years. Development increases requirements for water abstraction, as well as having the potential to impact the quality of water bodies. Efforts should be made to ensure that development is located in areas where sufficient water supply capacity is available, and where changes will not adversely affect the quality of water bodies. Rivers such as the Mardyke, where nearby development has already adversely influenced water quality, should be protected and improved wherever possible.
- 3.32 **Economy and employment** – While jobs growth in the Borough has been strong in recent years, further work will be needed to ensure that full benefit is realised from investment in the growth hubs to meet the 26,000 jobs target by 2021. The Thurrock economy is also heavily reliant on relatively low-paying service jobs, particularly in logistics and retail. Further work is needed to make the economy more resilient and improve the productivity of employment in the Borough.
- 3.33 **Education and skills** – Skill shortages and low attainment in education has been a characteristic of Thurrock for a number of years. Despite improvements, particularly in attainment at GSCE

level, the Borough performs poorly against regional and national averages for those going on to further and higher education. This has created challenges for businesses looking to grow, who have found it difficult to recruit sufficiently skilled staff. If Thurrock hopes to fully capitalise on economic development opportunities such as the London Gateway, it will need to improve the accessibility and provision of high quality education and training facilities.

- 3.34 **Housing** – Overcrowding is a problem in Thurrock, with the supply of housing in recent years falling below increasing demand. The Borough’s growing young population will create additional demand for larger family homes, while relatively low levels of income will need to be taken into account through the provision of affordable accommodation. Substantial spatial variation exists in housing deprivation across Thurrock. This will need to be addressed by targeting residential development in areas where the barriers to housing are greatest.
- 3.35 **Deprivation** – There is considerable spatial variation in deprivation levels seen across Thurrock. Certain areas which rank among the most deprived in the country need to be targeted through spatial planning, particularly with a view to encouraging development that will provide jobs, raise income levels and reduce barriers to housing and services.
- 3.36 **Crime** – While reported crime rates have been increasing in the last few years, it is difficult to determine whether this represents an actual increase in crime or simply an increase in the numbers of crimes being reported. Either way, crime remains an important issue, not just for Thurrock but for any local authority. Reducing crime and fear of crime is an important element in improving the health and well-being of a community. It can also have socio-economic implications if residents and businesses choose to avoid certain areas with high levels of crime, which can further worsen deprivation experienced there. Opportunities for development to reduce levels and fear of crime, particularly in deprived areas must be pursued.
- 3.37 **Equalities** – Local authorities have a legal requirement to ensure that spatial planning and development does not disproportionately affect a particular group or groups with protected characteristics. The Local Plan should provide and promote opportunities for all of the Borough’s residents, including those with protected characteristics. A review of baseline information suggests the Borough has an ageing population, particularly in rural areas (with poor access to services), growth in the numbers of young people in urban areas, growing ethnic diversity and under-provision/overcrowding of Gypsy and Traveller sites.
- 3.38 **Pollution and health** – The risk of environmental pollution and associated adverse health effects is something that needs to be carefully considered in spatial planning. Developments should avoid worsening existing air and water quality, causing unacceptable noise pollution, or mobilising pollution from historically contaminated land.
- 3.39 **Physical activity and obesity** – Obesity continues to be a major problem in Thurrock. The Borough performs substantially worse than regional and national averages in terms of child obesity (for both reception and year 6 age groups), adult obesity and adult participation in sport. Spatial planning has an important role to play in encouraging active lifestyles, particularly if it encourages active transport modes such as walking and cycling, and through provision of sufficient quality open spaces and recreational resources. Significant steps need to be taken if the Borough is to reverse current negative trends.
- 3.40 **Access to services and facilities** – Thurrock performs well against regional and national averages on journey times to key services via a range of transport modes. Nevertheless, it will be important to ensure that future developments, particularly those which will provide large numbers of jobs or key services are accessible to all. Access to healthcare and education are two areas where improvements are particularly needed.
- 3.41 **Transport safety** – With increases in the volume of traffic on Thurrock’s road network anticipated in the coming years, efforts will need to be made to ensure that infrastructure is able to cope with this increase in capacity. Increased traffic volumes and congestion can increase vehicle journey times, air pollution, the likelihood of road accidents and create challenges for cyclists and pedestrians who also use the network. Where possible, development should seek to reduce the volumes of traffic on roads by providing and promoting alternative transport modes, including public transport and non-motorised forms of travel such as walking and cycling.

4 Sustainability Appraisal findings for the Vision, Objectives and Policy Principles

- 4.1 This chapter presents the SA findings for the Local Plan Vision, Draft Strategic Objectives and Policy Principles set out in Section 3 of the Issues and Options (Stage 2) document. The Council identified the proposed vision, objectives and policy principles through the Issues and Options (Stage 1) consultation, consideration of key issues in the area, national policy and other evidence base and technical studies.
- 4.2 As this section of the Issues and Options (Stage 2) document is aspirational, setting out the vision that the Council wishes to achieve, there are not considered to be any reasonable alternatives.
- 4.3 The vision and objectives are expressed in general terms, reflecting aspirations that the Local Plan will aim to achieve through the policies and site allocations in the plan. Where the vision or an objective directly addresses one of the SA Objectives, we have assumed a significant effect.

Local Plan Vision

- 4.4 The vision includes achievement of more sustainable patterns of living through expansion of economic hubs, new, mixed-use development and improvements to the public transport network. These factors are expected to reduce *per capita* car use and to reduce the need to travel, therefore having positive effects on SA17: access to services & facilities. In addition, this is expected to result in a reduction in air pollutants and greenhouse gases associated with vehicular transport. However, the vision also promotes industry, including the logistics sector, which could lead to increases in vehicle movements both on land and along the Thames, resulting in increased emissions of air pollutants and greenhouse gases, therefore mixed minor positive and minor negative effects have been recorded for SA1: air quality and SA3: climate change & energy.
- 4.5 The vision refers to environmental enhancements and enhancing the natural and built environments. This could refer to enhancements in relation to many SA objectives, including SA2: biodiversity, flora & fauna; SA4: historic environment; SA6: geology & soils; SA7: landscape, townscape & visual; SA9: noise; and SA10: water resources and quality. In addition, the vision does not refer to the need to balance development with environmental protection and enhancement, resulting in minor positive effects with uncertainty against these SA objectives. The vision also looks to build on the Borough's distinctive and unique character, which could add to the minor positive effects identified with regards to SA4: historic environment and SA7: landscape, townscape & visual.
- 4.6 The vision promotes expansion of Thurrock's economic hubs, which largely lie along the Thames. Such expansion has potential to increase flood risk and/or be affected by flooding, as the majority of land along the River Thames is within Flood Zone 3, although much of this is already developed and protected to some extent by existing flood defences. As a result, minor negative effects have been identified against SA5: flood risk.
- 4.7 The vision strongly promotes economic growth to secure the position of Thurrock as the economic powerhouse of South Essex and improving educational attainment, therefore having significant positive effects with regards to SA11: economy & employment and SA12: education & skills.
- 4.8 The vision includes the delivery of high, quality, desirable housing in line with local need and aims for this to stimulate a buoyant housing market. This is expected to have significant positive effects for SA13: housing.
- 4.9 The vision states that the working population will be 'inclusive', which is expected to promote equality. As this inclusivity is not further expanded on in the vision, and this applies to the

working population only, minor positive effects with uncertainty are recorded with regards to SA15: equalities.

- 4.10 While health and wellbeing are not explicitly mentioned in the vision, delivery of high quality housing and environmental improvements are likely to have positive effects on both physical and mental health, leading to minor positive effects on SA16: health and wellbeing.

Table 4.1: SA scores for the Local Plan Vision

	1: Air quality	2: Biodiversity, flora & fauna	3: Climate change & energy	4: Historic environment	5: Flood risk	6: Geology & soils	7: landscape, townscape & visual	8: Materials & waste	9: Noise	10: Water resources & quality	11: Economy & employment	12: Education & skills	13: Housing	14: Crime & safety	15: Equalities	16: Health & wellbeing	17: Access to services & facilities
Vision	+/-	+?	+/-	+?	-	+?	+?	0	+?	+?	++	++	++	0	+?	+	+

Draft Strategic Objectives

- 4.11 The Issues and Options (Stage 2) document sets out 20 draft strategic objectives for the Local Plan. These are set out in **Table 4.2**, which also sets out a 'topic' as a shorter reference for each objective. The sustainability effects of the objectives are set out by SA objective below.

Table 4.2: Draft Strategic Objectives and relevant topics

Topic	Objective
Accessibility	Improve accessibility to employment, local services and facilities.
Congestion	Reduce congestion.
Public transport	Support integrated and well-connected public transport.
Economy	Support the Borough's economic success.
Carbon footprint	Reduce the Borough's carbon footprint.
Housing	Provide an appropriate mix of high quality and affordable housing to meet the needs of all sections of the community.
Community infrastructure	Ensure the delivery of an appropriate range of high quality community infrastructure and services.
Regeneration & equality	Deliver regeneration and reduce inequality and social deprivation.

Topic	Objective
Employment	Provide a range and choice of employment opportunities.
Character & heritage	Promote, conserve and enhance the special character and heritage of Thurrock.
Green & open space	Provide, improve and maintain a well-designed network of green places and open spaces.
Development sites	Identify and deliver sufficient suitable development sites to meet Thurrock's future housing, employment and other needs.
Health and wellbeing	Improve the health and well-being of the Borough's residents.
Green Belt	Retain an effective Green Belt.
Retail centres	Maintain and enhance the Borough's network of retail centres as a focus for shopping, leisure, business, housing and community activity.
Tranquillity	Protect and enhance the Borough's tranquil areas.
Waste	Reduce waste and meet future needs.
Environmental assets	Conserve and enhance the Borough's built and natural environmental assets.
River Thames	Value and protect the role played by the River Thames as an economic and environmental asset.
Design & future-proofing	Ensure new development is well designed and future-proofed to meet changing economic, social, technological and environmental needs.

Assessment results

SA1: Air quality

- 4.12 The **accessibility** objective is expected to reduce the need to travel to employment, local services and facilities and may enhance accessibility to these by enhancing public transport links. Similarly, the **congestion, public transport** and **carbon footprint** objectives are expected to be implemented in a way that will reduce the number of cars¹⁰ on the road. This is expected to reduce emissions of air pollutants associated with transport.
- 4.13 The **green and open space** objective may help to improve air quality, as vegetation such as trees can help filter pollutants from the air, resulting in minor positive effects for this SA objective.

SA2: Biodiversity, flora and fauna

- 4.14 The **green and open space** objective is expected to have minor positive effects on biodiversity as green space can provide habitat for wildlife.
- 4.15 One of the purposes of the Green Belt is to safeguard the countryside from encroachment. As the countryside is generally likely to have greater biodiversity value than urban areas, the **Green Belt** objective is assessed as having minor positive effects on this SA objective.

¹⁰ 'Cars' includes all private motorised vehicles, such as cars, vans and motorcycles.

4.16 The **tranquillity** objective could have minor positive effects on SA2, as tranquil areas are likely to include green spaces and rural areas with biodiversity value. In addition, protecting tranquil areas is likely to reduce disturbance to the wildlife living in those areas.

4.17 The **environmental assets** and **River Thames** objectives are expected to include conservation and enhancement of habitats and other biodiversity assets, leading to positive effects on SA2.

SA3: Climate change & energy

4.18 The **accessibility** objective is expected to reduce the need to travel to employment, local services and facilities and may enhance accessibility to these by enhancing public transport links. Similarly, the **congestion** and **public transport** objectives are expected to be implemented in a way that will reduce the number of cars on the road. This is expected to reduce emissions of greenhouse gases associated with transport.

4.19 The **carbon footprint** objective is expected to directly address this SA objective, therefore significant positive effects have been identified.

4.20 The **design and future-proofing** objective is expected to result in energy efficient buildings and those including renewable energy technology, therefore a minor positive effect is recorded against SA3.

SA4: Historic environment

4.21 The **character and heritage** objective directly addresses this SA objective, therefore significant positive effects have been recorded.

4.22 One of the purposes of the Green Belt is to preserve the setting and special character of historic towns. As such, the **Green Belt** objective is expected to have minor positive effects on SA4.

4.23 The **environmental assets** objective is expected to include conservation and enhancement of historic assets, resulting in minor positive effects on SA4.

4.24 The **design and future-proofing** objective is expected to result in buildings designed to be compatible with the historic environment, resulting in minor positive effects on SA4.

SA5: Flood risk

4.25 The **green and open space** objective is expected to have minor positive effects on this SA objective, as green space can help reduce flood risk by providing drainage for surface water.

4.26 The **design and future-proofing** objective is expected to result in design that includes consideration of and resilience to current and future flood risk, resulting in positive effects on SA5.

SA6: Geology & soils

4.27 One of the purposes of the Green Belt is to safeguard the countryside from encroachment. Therefore, the **Green Belt** objective may help preserve soil resources in the countryside.

4.28 The **environmental assets** objective is expected to include conservation and enhancement of geology and soils, resulting in minor positive effects on SA6.

SA7: landscape, townscape & visual

4.29 The **character and heritage** objective directly addresses this SA objective, therefore significant positive effects have been recorded.

4.30 The **green and open space** objective is likely to have minor positive effects on this SA objective as creating and improving green areas can help improve visual amenity and local character.

4.31 The purposes of the Green Belt include to safeguard the countryside from encroachment, check unrestricted sprawl of large built up areas, prevent neighbouring towns from merging, and to preserve the setting and special character of historic towns. As these factors are all likely to contribute to preserving landscape character in rural areas, the **Green Belt** objective is expected to have minor positive effects.

4.32 The **tranquillity** objective could have minor positive effects on SA7, as tranquillity is likely to be part of the character of these areas.

- 4.33 The **environmental assets** and **River Thames** objectives are expected to include conservation and enhancement of landscape, including the landscape of the River Thames, and townscape, resulting in minor positive effects on SA7.
- 4.34 The **design and future-proofing** objective is expected to result in significant positive effects on this SA objective, as well designed buildings can conserve and enhance landscape and townscape character and visual amenity.
- SA8: Materials & waste*
- 4.35 One of the purposes of the Green Belt is to safeguard the countryside from encroachment. Therefore, the **Green Belt** objective may help to prevent sterilisation of minerals resources, which are more likely to be accessible in rural areas.
- 4.36 The **waste** objective directly addresses this SA objective, therefore significant positive effects are expected.
- 4.37 The **design and future-proofing** objective is expected to result in development that uses resources efficiently, resulting in minor positive effects on SA8.
- SA9: Noise*
- 4.38 The **tranquillity** objective could have minor positive effects on SA9, as protecting tranquil areas is likely to equate to preventing substantial increases in noise.
- SA10: Water resources & quality*
- 4.39 The **environmental assets** and **River Thames** objective is expected to include conservation and enhancement of water resources, resulting in minor positive effects on SA10.
- 4.40 The **design and future-proofing** objective is expected to result in development that uses resources efficiently, resulting in minor positive effects on SA10.
- SA11: Economy & employment*
- 4.41 The **accessibility** objective specifically refers to improving accessibility to employment, resulting in significant positive effects against this objective. The **public transport** objective may also increase accessibility of employment opportunities and may enhance connectivity to town centres, shopping and leisure facilities, which could increase spending in these areas.
- 4.42 The **economy, employment** and **development sites** objectives are expected to have significant positive effects against this SA objective, as it is directly addressing the SA objective.
- 4.43 The **green and open space** objective is expected to have minor positive effects on this SA objective, as green infrastructure can help attract workers, businesses and inward investment.
- 4.44 One of the purposes of the Green Belt is to assist in urban regeneration. Regeneration can improve perceptions of an area and attract new workers, businesses and investment. Therefore, the **Green Belt** objective and the **regeneration and equality** objective are expected to have minor positive effects on SA11.
- 4.45 The **retail centres** objective is expected to have minor positive effects on this SA objective, as it could increase the vitality of, and therefore spending in, retail centres, which could also attract new businesses to the area.
- 4.46 The **River Thames** objective includes valuing and protecting the economic role of the River Thames, therefore minor positive effects are expected against SA11.
- 4.47 The **design and future-proofing** objective states that development should meet changing economic needs, therefore minor positive effects are expected with regards to SA11.
- SA12: Education & skills*
- 4.48 The **accessibility, public transport** and **community infrastructure** objectives may increase accessibility of education opportunities. The **economy** objective may have indirect, minor positive effects for this objective as a skilled population is key to supporting a strong economy.
- 4.49 The **regeneration and equality** objective is likely to have minor positive effects for the economy, as regeneration can attract inward investment and growth.

4.50 The **employment** objective may lead to increased opportunities for workplace training and apprenticeships, therefore minor positive effects are recorded, although these are uncertain.

SA13: Housing

4.51 The **housing** and **development sites** objectives directly address this SA objective, therefore a significant positive effect has been recorded.

SA14: Crime & safety

4.52 The **community infrastructure** objective may increase the number and quality of community facilities and services, which could promote community cohesion. More cohesive communities are likely to be more inclusive and can reduce crime and the fear of crime.

4.53 The **regeneration and equality** objective may help to reduce crime. Regeneration is expected to lead to more attractive places and a greater sense of local pride. In addition, less deprived areas generally experience lower levels of crime and reducing inequalities could help lead to more cohesive communities, which can also reduce crime and the fear of crime. As such, minor positive effects are expected for this SA objective.

SA15: Equalities

4.54 The **accessibility** objective may help reduce inequalities in Thurrock by promoting access to employment, local services and facilities for everyone, although it is uncertain whether this will be limited to physical accessibility or whether it will also other factors, such as facilities for those of different religions and races and adjustments for those with non-physical disabilities.

4.55 The **public transport** objective may also increase accessibility to local services and facilities, including employment, education and healthcare. This is particularly important for those who cannot drive or who are unable to walk very far, such as the elderly, disabled people, pregnant women and those with young children.

4.56 The **housing** objective states that housing should meet the needs of all sections of the community, therefore this may help reduce housing deprivation and inequalities between different groups, leading to positive effects on this SA objective.

4.57 The **community infrastructure** objective may promote community cohesion, which is likely to lead to more inclusive communities. In addition, community infrastructure may provide improved opportunities for those with protected characteristics, for example by providing faith facilities and meeting spaces for youth clubs, clubs for older people or support services. This is expected to result in minor positive effects on this SA objective, but these effects are uncertain as it depends on the facilities to be provided.

4.58 The **regeneration and equality** objective specifically addresses this SA objective, therefore significant positive effects are recorded.

4.59 The **design and future-proofing** objective states that development should meet changing social needs, which could result in reductions in inequalities, resulting in minor positive effects for this SA objective. For example, as the population is ageing, housing and facilities need to be designed to avoid discrimination of older people.

SA16: Health & wellbeing

4.60 The **accessibility** and **public transport** objectives may work to improve health and wellbeing by improving access to healthcare and recreational opportunities. Along with the **congestion** objective, these objectives could help to improve health and wellbeing by reducing air pollution and improving road safety through a reduction in road traffic.

4.61 The **housing** objective looks to ensure housing is appropriate and of high quality, which is expected to have positive implications on the health of those living in this housing.

4.62 The **community infrastructure** objective is expected to include health facilities and opportunities for recreation and leisure, therefore this is expected to have minor positive impacts on health.

- 4.63 The **regeneration and equality** objective is expected to have minor positive effects on this SA objective, as social deprivation is linked to poorer health, therefore reducing deprivation is expected to improve levels of health.
- 4.64 The **green and open space** objective is expected to have significant positive effects on health, as open space and green space provides places for residents to take part in active recreation, as well as boosting mental wellbeing by improving visual amenity of an area.
- 4.65 The **health and wellbeing** objective directly addresses this SA objective, therefore significant positive effects have been recorded.
- 4.66 The **retail centres** objective is expected to have minor positive effects on this SA objective as it encourages leisure opportunities and community activity, which could help to enhance community cohesion and therefore social and mental wellbeing.
- 4.67 The **tranquillity** objective could have minor positive effects on SA16, as spending time in tranquil areas can have positive implications for health.
- 4.68 The **environmental assets** objective is expected to have minor positive effects on SA16, as conservation and enhancement of the natural and built environment is expected to contribute to attractive places to live and a well-functioning ecosystem, which will contribute to a healthy living environment.

SA17: Access to services & facilities

- 4.69 The **accessibility** objective directly addresses this SA objective, therefore significant positive effects have been identified. The **public transport** objective is also likely to improve access to services and facilities, resulting in minor positive effects.
- 4.70 The **community infrastructure** objective is likely to increase the availability and accessibility of community services and facilities, resulting in significant positive effects on SA17.
- 4.71 The **retail centres** objective is expected to have minor positive effects on this SA objective as it encourages shopping, leisure, business, housing and community activity within retail centres, which could result in many services and facilities being located within close proximity, in areas that are likely to be well served by transport infrastructure.

Table 4.3: SA scores for the Draft Strategic Objectives

	1: Air quality	2: Biodiversity, flora & fauna	3: Climate change & energy	4: Historic environment	5: Flood risk	6: Geology & soils	7: landscape, townscape & visual	8: Materials & waste	9: Noise	10: Water resources & quality	11: Economy & employment	12: Education & skills	13: Housing	14: Crime & safety	15: Equalities	16: Health & wellbeing	17: Access to services & facilities
Accessibility	+	0	+	0	0	0	0	0	0	0	+	+	0	0	+	+	+
Congestion	+	0	+	0	0	0	0	0	0	0	0	0	0	0	0	+	0
Public transport	+	0	+	0	0	0	0	0	0	0	+	+	0	0	0	+	+

	1: Air quality	2: Biodiversity, flora & fauna	3: Climate change & energy	4: Historic environment	5: Flood risk	6: Geology & soils	7: landscape, townscape & visual	8: Materials & waste	9: Noise	10: Water resources & quality	11: Economy & employment	12: Education & skills	13: Housing	14: Crime & safety	15: Equalities	16: Health & wellbeing	17: Access to services & facilities
Economy	0	0	0	0	0	0	0	0	0	0	+	+	0	0	0	0	0
Carbon footprint	+	0	+	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Housing	0	0	0	0	0	0	0	0	0	0	0	0	+	0	+	+	0
Community infrastructure	0	0	0	0	0	0	0	0	0	0	0	+	0	+	+	+	+
Regeneration & equality	0	0	0	0	0	0	0	0	0	0	+	0	0	+	+	+	0
Employment	0	0	0	0	0	0	0	0	0	0	+	+	0	0	0	0	0
Character & heritage	0	0	0	+	0	0	+	0	0	0	0	0	0	0	0	0	0
Green & open space	+	+	0	+	+	+	0	0	0	0	+	0	0	0	0	+	0
Development sites	0	0	0	0	0	0	0	0	0	0	+	0	+	0	0	0	0
Health and wellbeing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	+	0
Green Belt	0	+	0	+	0	+	0	+	0	0	+	0	0	0	0	0	0
Retail centres	0	0	0	0	0	0	0	0	0	0	+	0	0	0	0	+	+
Tranquillity	0	+	0	0	0	0	+	0	+	0	0	0	0	0	0	+	0
Waste	0	0	0	0	0	0	0	+	0	0	0	0	0	0	0	0	0
Environmental assets	0	+	0	+	0	+	+	+	0	+	0	0	0	0	0	+	0

	1: Air quality	2: Biodiversity, flora & fauna	3: Climate change & energy	4: Historic environment	5: Flood risk	6: Geology & soils	7: landscape, townscape & visual	8: Materials & waste	9: Noise	10: Water resources & quality	11: Economy & employment	12: Education & skills	13: Housing	14: Crime & safety	15: Equalities	16: Health & wellbeing	17: Access to services & facilities
River Thames	0	+	0	0	0	0	+	0	0	+	+	0	0	0	0	0	0
Design & future-proofing	0	0	+	+	+	0	+	+	0	+	+	0	0	0	+	0	0

Conclusions and Recommendations

- 4.72 The assessment of the Draft Strategic Objectives are primarily positive or negligible, as each objective tends to directly address one or two particular topics and all are intended to improve Thurrock in some way.
- 4.73 There are a small number of minor positive effects identified that are associated with an element of uncertainty. These could be addressed by ensuring the objectives specifically address these issues. For example, the Accessibility objective could specify that 'access to employment, local services and facilities for everyone', includes physical accessibility as well as access for those with protected characteristics and adjustments for those with non-physical disabilities.

Policy Principles

- 4.74 The Issues and Options (Stage 2) document sets out 10 Policy Principles for the Local Plan. The sustainability effects of the Policy Principles are set out below. Due to the high level nature of these Policy Principles, the assessment below focuses on the general implications of what is set out explicitly in the Policy Principle. Some of the Policy Principles could lead to policies that promote development, which could have varying effects on environmental factors depending on the location of that development. However, given that these are high-level principles only and the location of any resulting development is not currently known, locational factors have not been taken into account in the assessments below.

Assessment results

1. Delivering the Right Infrastructure in the Right Place at the Right Time

- 4.75 The Principle requires crucial infrastructure to be brought forward in the right place at the right time. In particular, the text refers to transport and community infrastructure. This could include sustainable transport infrastructure, which could encourage residents or workers at new developments to travel by sustainable modes of transport, therefore minimising emissions of air pollutants and greenhouse gases associated with motorised vehicles. As such, minor positive uncertain effects are expected for SA1: air quality, and SA3: climate change & energy. Provision of appropriate infrastructure is also expected to ensure that residents can access employment opportunities, education facilities, healthcare facilities and recreational facilities, therefore leading to minor positive effects on SA11: economy & employment, SA12: education & skills and SA16: health & wellbeing. In addition to accessing existing facilities, this Policy Principle encourages

provision of new services and facilities, leading to significant positive effects on SA17: access to services & facilities. Provision of appropriate community infrastructure may help to ensure that services and facilities are accessible to those with reduced mobility, such as the elderly or disabled, and may provide space for groups, such as faith groups, to meet, resulting in minor positive effects on SA15: equalities. These effects are uncertain as it is not known whether new facilities will, in fact, address the needs of such groups.

2. Positive Health and Well Being Impact

- 4.76 This Principle is focused on ensuring community health and wellbeing is central to the Local Plan, resulting in significant positive effects for SA16: health & wellbeing. The Principle specifies that this includes providing homes and community facilities to meet local needs and environments free from air pollution, leading to minor positive effects for SA1: air quality, SA13: housing and SA 17: access to services & facilities. Minor positive effects, some uncertain, are expected for SA 2: biodiversity & geodiversity, SA5: flood risk, SA7: landscape, townscape & visual, 9: noise, 14: crime & safety and 15: equalities, as this Principle is likely to address these topics in maintaining and enhancing amenity and community safety, as well as benefitting people and wildlife through provision of open space.

3. Meeting Thurrock's Housing Needs

- 4.77 As this Principle states that policies will identify necessary infrastructure to ensure the development of balanced communities, effects are similar to those for Policy Principle 1. In addition, this Policy Principle states that housing development should include high quality and affordable housing that will meet the needs of all sections of the community, therefore significant positive effects are expected for SA13: housing. In considering all sections of the community, particularly those on low incomes and the elderly (to which the Principle directly refers), this policy is expected to have minor positive effects on SA15: equalities.

4. Protect and Enhance the Character of Existing Communities

- 4.78 This Policy Principle encourages harnessing investment in new homes, including regeneration of existing centres. The Principle states that such development must protect and enhance the character of existing communities, which could have minor positive effects with regards to SA7: landscape, townscape & visual. In addition, regeneration often includes improvements to the townscape and public realm. Regeneration of an area can boost its image and attract economic investment; therefore minor positive uncertain effects are expected with regards to SA11: economy & employment.

5. Minimising Carbon Emissions

- 4.79 This Policy Principle looks to reduce carbon emissions, including by reducing the need to travel and encouraging sustainable modes of transport. This is likely to have significant positive effects on both SA1: air quality and SA3: climate change & energy, as many sources of greenhouse gas emissions, such as vehicular transport and burning of other fossil fuels, are also associated with emissions of air pollutants. In encouraging accessible neighbourhoods, walking and cycling, this Policy Principle is likely to encourage residents to travel by more active modes, therefore increasing physical activity levels and benefitting health, which will result in minor positive effects for SA16: health and wellbeing. In reducing the need to travel and promoting sustainable transport links, this Principle is expected to have significant positive effects on SA17: access to services & facilities.

6. Maintaining an Effective Green Belt

- 4.80 This Policy Principle prioritises development of all viable brownfield sites. This 'brownfield first' approach is expected to have positive effects on SA7: Landscape, townscape & visual. These effects are likely to be minor, as it is not possible to meet the whole of Thurrock's housing need on brownfield land. The Principle requires that the Green Belt continues to be effective, even though some will need to be released for development. Green Belt is a policy designation, rather than a sustainability designation, therefore this has limited impact on the sustainability objectives. However, the purposes of the Green Belt include: to preserve the setting and special character of historic towns; safeguard the countryside from encroachment; and assist in urban regeneration, therefore it could help to protect the countryside, which is likely to have higher biodiversity value

and could help to protect soils, agricultural land and mineral resources. This Principle could also help to encourage regeneration, which may help to improve the perception of an area and increase investment. As such, this Principle could have minor positive effects on SA2, SA4, SA6, SA8 and SA11. Additionally, the Policy Principle mentions the need to protect the character of the Borough and maintain key gaps between urban areas and settlements, therefore minor positive effects are likely with regards to SA7: landscape, townscape & visual.

7. Protecting and Delivering Quality in the Built Environment

- 4.81 This Policy Principle requires good design and 'garden community' principles to be promoted through the Local Plan. This is likely to lead to attractive developments that are complimentary to key features in the Borough, therefore significant positive effects are expected with regards to SA7: landscape, townscape & visual. This may also lead to development that respects the historic environment and protects the settings of heritage assets, resulting in minor positive uncertain effects on SA 4: historic environment. Attractive, well-designed places can also help to attract economic investment and to reduce opportunities for crime and the fear of crime. As such, minor positive effects are expected with regards to SA11: economy & employment and SA14: crime & safety.

8. Meeting Employment Needs

- 4.82 This Policy Principle requires policies to ensure that employment growth occurs in the right directions to protect and enhance the attractiveness of the Borough, therefore minor positive effects are expected for SA7: landscape, townscape & visual.
- 4.83 In looking to ensure Local Plan policies allow for employment and economic growth, this Policy Principle is likely to have significant positive effects on SA11: economy & employment. In ensuring the availability of an educated and skilled labour force, this Policy Principle may lead to provision and enhancement of educational opportunities, leading to minor positive effects on SA12: education & skills. The Policy Principle also requires that policies provide for sufficient housing to accommodate the needs of workers, leading to minor positive effects on SA 13: housing. The Policy Principle requires policies to ensure the benefits of ongoing job creation are accessible to all sections of the community, which should help to address SA15: equalities, resulting in significant positive effects on this objective. As a result of job creation and economic investment in the area, employment levels, skills levels and quality of life are likely to improve and as a result crime levels may decrease, therefore having indirect minor positive effects on SA14: crime and safety and SA16: health and wellbeing.

9. Ensuring our Town Centres Continue to Thrive

- 4.84 This Policy Principle is expected to stimulate investment in town centres, which could boost the local economy, therefore resulting in significant positive effects on SA11: economy & employment. Enhancing accessibility of town centres directly addresses SA17: access to services and facilities, therefore significant positive effects are expected for this objective. As a result of this, town centres may become more accessible to those with protected characteristics, such as the disabled, resulting in minor positive effects on SA 15: equalities.

10. The River Thames

- 4.85 This is a wide-reaching Policy Principle that promotes the economic exploitation but ecological conservation of the River Thames. In looking to protect the river in environmental and ecological terms, this Principle is expected to have significant positive effects on SA2: biodiversity, flora & fauna and as water quality is interwoven with this, minor positive effects are also expected with regards to SA10: water resources & quality. In protecting and enhancing the riverscape of Thurrock, this Principle is likely to have significant positive effects on SA7: landscape, townscape & visual. Given the river's close connection to the history of Thurrock, this may also have minor positive effects for SA4: historic environment.
- 4.86 The Policy Principle does not discuss flood risk, although the River Thames is the greatest source of fluvial flood risk in the Borough. Development along the river could be at risk or contribute to risk of flooding, therefore uncertain effects are recorded with regards to SA5: flood risk.
- 4.87 In promoting economic opportunities arising from Thurrock's location on the river, this Principle is expected to have significant positive effects on SA11: economy & employment. The Policy

Principle also touches on opportunities to promote residential development and recreational activities along the riverfront, resulting in minor positive effects for SA13: housing and SA16: health and wellbeing.

11. Managing Waste

- 4.88 Managing waste locally will reduce the distance waste travels and therefore this Policy Principle could contribute to minimising emissions of air pollutants and greenhouse gases from transportation of waste. This would have minor positive effects on SA1: air quality and SA3: climate change & energy.
- 4.89 In addition, this Policy Principle directly addresses SA8: materials & waste, as it states that minerals resources should be protected. As such, significant positive effects are expected with regards to SA8: materials & waste.

Table 4.4: SA scores for the Policy Principles

	1: Air quality	2: Biodiversity, flora & fauna	3: Climate change & energy	4: Historic environment	5: Flood risk	6: Geology & soils	7: landscape, townscape & visual	8: Materials & waste	9: Noise	10: Water resources & quality	11: Economy & employment	12: Education & skills	13: Housing	14: Crime & safety	15: Equalities	16: Health & wellbeing	17: Access to services & facilities
1. Infrastructure	+?	0	+?	0	0	0	0	0	0	0	+	+	0	0	+?	+	+
2. Health	+	+?	0	0	+?	0	+?	0	+	0	0	0	+	+	+	+	+
3. Housing	+?	0	+?	0	0	0	0	0	0	0	+	+	+	0	+	+	+
4. Communities	0	0	0	0	0	0	+	0	0	0	+?	0	0	0	0	0	0
5. Carbon emissions	+	0	+	0	0	0	0	0	0	0	0	0	0	0	0	+	+
6. Green Belt	0	+	0	+	0	+	+	+	0	0	+	0	0	0	0	0	0
7. Built environment	0	0	0	+?	0	0	+	0	0	0	+	0	0	+	0	0	0
8. Employment	0	0	0	0	0	0	+	0	0	0	+	+	+	+	+	+	0
9. Town centres	0	0	0	0	0	0	0	0	0	0	+	0	0	0	+	0	+
10. River	0	+	0	+	?	0	+	0	0	+	+	0	+	0	0	+	0

	1: Air quality	2: Biodiversity, flora & fauna	3: Climate change & energy	4: Historic environment	5: Flood risk	6: Geology & soils	7: landscape, townscape & visual	8: Materials & waste	9: Noise	10: Water resources & quality	11: Economy & employment	12: Education & skills	13: Housing	14: Crime & safety	15: Equalities	16: Health & wellbeing	17: Access to services & facilities
Thames		+					+				+						
11. Managing waste	+	0	+	0	0	0	0	+	0	0	0	0	0	0	0	0	0

Conclusions and Recommendations

- 4.90 The assessment of the Policy Principles are primarily positive or negligible, as each Principle tends to directly address one or two particular topics and, like the Draft Strategic Objectives, all are intended to improve Thurrock in some way.
- 4.91 The uncertain score identified with regards to Policy Principle 10: The River Thames could be addressed by clarifying how the issue of flood risk from the River Thames will be addressed. The uncertainties identified in relation to Policy Principles 1: Delivering the Right Infrastructure in the Right Place and at the Right Time and 3. Meeting Thurrock's Housing Needs could be addressed by adding details of how provision of new infrastructure will meet the needs of all residents. Similarly, uncertainty recorded against other Policy Principles could be addressed by specifically addressing the issues for which uncertainty has been identified.

5 Sustainability Appraisal findings for the level of growth options – Housing

Number of homes

- 5.1 This section assesses the housing quantum set out in the Issues and Options (Stage 2) document. The document explains that the government’s standard methodology for assessing housing need identifies a need for 1,173 homes per year in Thurrock (the Objectively Assessed Housing Need, or OAN). However, this does not consider whether any adjustments need to be made to the housing requirement to ensure that the provision of new housing addresses any imbalance between the available labour supply and the projected rate of job growth in the Borough. As such, further work is needed to determine whether this is the most suitable housing target.
- 5.2 Question 7 of the Issues and Options (Stage 2) document clarifies that there are two housing target options for Thurrock:
- Option A: Set a housing target that mirrors the objectively assessed housing need calculated using the standard method (1,173).
 - Option B: Set a housing target higher than Thurrock’s objectively assessed housing need calculated using the standard method to support increased economic growth in the borough.

Assessment results

- 5.3 Both options would result in a significant number of new homes in Thurrock. As most households in Thurrock have at least one car or van¹¹, this level of housing growth would be expected to lead to a significant increase in vehicles on the road, leading to an increase in emissions of air pollution and greenhouse gases. Therefore, significant negative effects are expected with regards to SA1: air quality and SA3: climate change & energy, although the significance of these effects may reduce over time as electric vehicles become more widespread. These are likely to be mixed with minor positive (but uncertain) effects, as this level of housing growth could fund improvements to public transport infrastructure and green infrastructure. The negative effects may be slightly lessened if a higher housing figure (Option A) is to be delivered, as this could result in greater investment in sustainable transport infrastructure, resulting in some uncertainty against this option. This is because the lower figure (Option B) may not provide for the additional housing need generated by economic growth. This could result in more of the working population living outside the Borough and therefore travelling longer distances to commute into the Borough.
- 5.4 The likely increase in traffic may reduce road safety, therefore having minor negative effects with regards to SA14: Crime & safety.
- 5.5 A higher level of growth under Option B would necessitate additional land take, including the need to develop greenfield land. This has potential to lead to negative effects on a number of environmental factors. It has been assumed that development would not take place within nationally or internationally designated sites, given their high levels of protection. However, significant negative impacts could still occur with regards to SA2: biodiversity, flora & fauna; SA4: historic environment; SA5: flood risk; SA6: geology and soils and SA7: landscape, townscape and visual. These effects are uncertain as they depend on the location and design of development. This is also true for the OAN (Option A) but effects would occur at a lesser scale. However, the OAN would still deliver a significant amount of housing growth and therefore this is not expected to alter the significance of these effects.

¹¹ https://www.nomisweb.co.uk/census/2011/QS416EW/view/1946157204?rows=cell&cols=rural_urban

- 5.6 Development of a large number of homes under both options would have the potential to significantly increase waste arisings in the Borough from their construction and occupation. It may also lead to development within close proximity of existing waste facilities. As such, a significant negative effect has been recorded for SA8: materials and waste, although this is uncertain, as it depends on the location and design of development. Development could also be designed in a way that maximises efficient resource use and waste recovery.
- 5.7 While housing is not inherently noisy, developing this scale of housing for both options could result in negative effects for SA9: noise, during construction and operation, as a result of increased traffic movements and introducing development into previously tranquil areas.
- 5.8 Delivering housing to meet the both options could put additional strain on water resources. Given that the Water Cycle Study (2010) identified that development up to 2025 was not likely to require strategic level investment in the water supply network, a minor negative effect is expected for SA10: water resources and quality. However, this is uncertain as the plan period runs to 2037/8.
- 5.9 The higher growth target (Option B) takes into account the projected level of economic growth in the Borough. As such, this option is likely to provide a local workforce to support the growing economy, therefore having a significant positive effect on SA11: economy & employment. However, the OAN does not take this into account and is therefore expected to have a minor positive uncertain effect on SA11, because although this level of housing would contribute to the local economy, more ambitious growth could be constrained.
- 5.10 Mixed positive and negative effects are expected with regards to SA12: education & skills; SA16: health and wellbeing and SA17: access to services & facilities for both options. This is because the scale of new development that would come forward in meeting the upper and lower OAN could provide funding for new and improved facilities to meet current and future needs. Alternatively, development could result in increased pressure on existing services and facilities, resulting in negative effects. In addition, anticipated negative effects with regards to SA objectives 1 to 11 could have negative consequences for health, for example due to the impacts of increased air pollution, risk of flooding or loss of amenity.
- 5.11 Both options would meet the OAN and therefore would have significant positive effects for SA13: housing, as it would ensure the appropriate level of housing provision to meet the needs of Thurrock. This significant positive effect is associated with uncertainty for the OAN (Option A), as this may not provide for the additional housing need generated by economic growth. This could result in more of the working population living outside the Borough.
- 5.12 The number of homes to be provided is not expected to directly affect SA15: equalities as this is more dependent on the design of development.

Table 5.1: SA scores for the housing quantum

	1: Air quality	2: Biodiversity, flora & fauna	3: Climate change & energy	4: Historic environment	5: Flood risk	6: Geology & soils	7: landscape, townscape & visual	8: Materials & waste	9: Noise	10: Water resources & quality	11: Economy & employment	12: Education & skills	13: Housing	14: Crime & safety	15: Equalities	16: Health & wellbeing	17: Access to services & facilities
A. OAN (1,173 dpa)	+? /--	--?	+? /--	--?	--?	--?	--?	--?	-?	-?	+?	+ +? /-- ?	+	-	0	++ ?/- -?	++ ?/- -?
B. Higher housing target	+? /-- ?	--?	+? /-- ?	--?	--?	--?	--?	--?	-?	-?	++	+ +? /-- ?	+	-	0	++ ?/- -?	++ ?/- -?

Conclusions and Recommendations

- 5.13 Both housing quantum options are likely to have similar effects, as all will lead to development of a significant number of new homes in the Borough. Whilst the SA only categorises effects into being minor or significant, the greater the number of homes to be delivered, the greater the likely magnitude of the effects. There are high levels of uncertainty as to the actual effects of each option, particularly with regards to the environmental objectives, as many effects will depend on the exact location of new development. Such effects will need to be considered through development of development management policies.

Affordable Housing

Planning for Affordable Housing

- 5.14 Question 8 of the Issues and Options (Stage 2) document sets out three possible approaches to provision of affordable houses, as follows:
- Option A: Borough-wide affordable housing target.
 - Option B: Split affordable housing target (lower target for previously developed land).
 - Option C: Site specific affordable housing target (set for each allocated site).

Assessment results

- 5.15 All options would make a contribution to meeting the affordable housing need of 48%. However, the extent to which this need is met is dependent on the targets to be set. As such, all options are expected to have significant positive uncertain effects with regards to SA13: housing. Provision of affordable housing can also reduce financial constraints, stress and associated health problems for those requiring affordable housing; therefore all options are expected to result in minor positive effects on SA16: health and wellbeing.
- 5.16 Option B is expected to have minor positive effects on SA6: geology & soils; SA7: landscape, townscape and visual and SA8: materials and waste, as it would incentivise development of

brownfield land, which would help to conserve natural resources and may enhance the appearance of an area. Option B could have minor negative effects for SA15: equalities as it would result in less affordable housing on brownfield land, which is more likely to be in urban areas. While household income is not a protected characteristic, this option could result in some groups of people being excluded from certain areas of the Borough in terms of housing.

- 5.17 Option C is expected to have largely the same effects as Option A. SA15: equalities has been assessed as uncertain for this option, as effects on equalities are likely to depend on how affordable housing targets differ in certain areas of the Borough.

Table 5.2: SA scores for planning for affordable housing options

	1: Air quality	2: Biodiversity, flora & fauna	3: Climate change & energy	4: Historic environment	5: Flood risk	6: Geology & soils	7: landscape, townscape & visual	8: Materials & waste	9: Noise	10: Water resources & quality	11: Economy & employment	12: Education & skills	13: Housing	14: Crime & safety	15: Equalities	16: Health & wellbeing	17: Access to services & facilities
A: Borough wide target	0	0	0	0	0	0	0	0	0	0	0	0	+	0	0	+	0
B: Split target	0	0	0	0	0	+	+	+	0	0	0	0	+	0	-?	+	0
C: Site specific target	0	0	0	0	0	0	0	0	0	0	0	0	+	0	?	+	0

Affordable Housing Tenures

- 5.18 Question 9 of the Issues and Options (Stage 2) document sets out three possible approaches to addressing the need for various tenures of affordable housing, as follows:
- Option A: Prioritise the delivery of social rented housing units
 - Option B: Prioritise the delivery of intermediate housing units (i.e. shared ownership, starter homes)
 - Option C: Allow the tenure mix to be negotiated by the Council on a site by site basis (taking account of the Council’s most up to date evidence on housing need).

Assessment results

- 5.19 All options would contribute to meeting the affordable housing need of 48%, albeit in different forms (social rent & private ownership). However, the extent to which affordable housing need is met for each option is dependent on future socio-economic conditions determining viability and the total number of affordable homes built. As such, all options are expected to have significant positive effects with uncertainty in relation to SA13: Housing.
- 5.20 A minor positive effect is expected in relation to SA16: Health and wellbeing for all three options. This is because all options are likely to result in provision of affordable housing, which can reduce financial constraints, stress and associated health problems for those requiring affordable housing. However, it is considered that Option A, which specifically supports the provision of

social rented housing, could offer most support to those with the greatest need. However, Option C may provide the flexibility to best address the specific needs of a particular area.

- 5.21 Options A and B are both likely to have minor positive effects in relation to SA15: Equalities. The provision of social rented housing through Option A would help to provide affordable housing to those to which market housing is least accessible. Option B would help overcome barriers to home ownership by helping those with lower incomes and first time buyers to own their own homes. Option C has been recorded as uncertain against this objective as the extent to which those who are disadvantaged are assisted will depend on the tenure mix negotiated by the Council at the time of planning individual housing developments.

Table 5.3: SA scores for affordable housing tenures options

	1: Air quality	2: Biodiversity, flora & fauna	3: Climate change & energy	4: Historic environment	5: Flood risk	6: Geology & soils	7: landscape, townscape & visual	8: Materials & waste	9: Noise	10: Water resources & quality	11: Economy & employment	12: Education & skills	13: Housing	14: Crime & safety	15: Equalities	16: Health & wellbeing	17: Access to services & facilities
A: Prioritise Social Rent Housing	0	0	0	0	0	0	0	0	0	0	0	0	+	0	+	+	0
B: Prioritise intermediate housing units	0	0	0	0	0	0	0	0	0	0	0	0	+	0	+	+	0
C: Negotiate tenure mix on site-by-site basis	0	0	0	0	0	0	0	0	0	0	0	0	+	0	?	+	0

Delivery of Affordable Housing

- 5.22 Question 10 of the Issues and Options (Stage 2) document asks whether the Council should seek to increase the supply of affordable housing in the Borough by borrowing more money to build homes. This implies there are two options for the Local Plan:
- Option A: Borrow more money to increase supply of affordable housing.
 - Option B: Do not borrow more money to build new homes.

Assessment results

- 5.23 Option A is likely to have a significant positive effects in relation to SA16 as borrowing money would help to increase the supply of affordable housing helping to meet the Council’s affordable target of 48%.
- 5.24 Option A is likely to have a minor positive effect in relation to SA15 Equalities and SA16: Health and Wellbeing. The provision of additional affordable housing from borrowed money would help

those who are disadvantaged in terms of housing, reduce financial constraint, stress and associated health problems for those requiring affordable housing.

- 5.25 Option B is expected to have negligible effects against all SA objectives, as this represents the likely future baseline without the plan.
- 5.26 It should be noted assessing the financial implications of borrowing money for the Council in a broader sense are outside the scope of this SA.

Table 5.4: SA scores for delivery of affordable housing options

	1: Air quality	2: Biodiversity, flora & fauna	3: Climate change & energy	4: Historic environment	5: Flood risk	6: Geology & soils	7: landscape, townscape & visual	8: Materials & waste	9: Noise	10: Water resources & quality	11: Economy & employment	12: Education & skills	13: Housing	14: Crime & safety	15: Equalities	16: Health & wellbeing	17: Access to services & facilities
A: Borrow money to increase supply of affordable housing	0	0	0	0	0	0	0	0	0	0	0	0	+	0	+	+	0
B: Do not borrow money to build additional affordable homes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Conclusions and recommendations

- 5.27 All options, except Option B for Question 10, are expected to have positive effects with regards to housing and health, as all will lead to provision of some level of affordable housing. A split affordable housing target may have additional positive effects for environmental objectives, resulting from encouraging development of brownfield land, but may have negative effects in terms of equalities, by encouraging a smaller proportion of affordable housing to be built in urban areas. It is likely that the most sustainable option will be a combination of the options presented above.

Meeting the Needs of Specific Groups

- 5.28 This section of the Issues and Options (stage 2) document is a general statement about the needs to plan positively for a mix of housing based on the type of people living and expected to live in the Borough. It does not present any options for assessment. The general policy principle of providing the housing to meet the needs of specific groups was assessed in terms of Policy Principle b) Meeting Housing Needs, in **Chapter 4**.

Housing Mix

Nationally Described Space Standard

5.29 Question 11 of the Issues and Options (stage 2) document also asks whether the Council should adopt the Nationally Described Space Standard (NDSS) in the Local Plan. Therefore, there are two options:

- Option A: Adopt the NDSS in the Local Plan.
- Option B: Do not adopt the NDSS.

Assessment results

5.30 Not adopting the NDSS would not result in a change to the baseline, therefore no sustainability effects are likely. Adopting the NDSS is expected to have minor positive effects for SA13: housing and SA16: health & wellbeing, as it is expected to result in higher quality housing development, as the size of homes are more likely to be appropriate for the number of residents living there.

Table 5.5: SA scores for NDSS options

	1: Air quality	2: Biodiversity, flora & fauna	3: Climate change & energy	4: Historic environment	5: Flood risk	6: Geology & soils	7: landscape, townscape & visual	8: Materials & waste	9: Noise	10: Water resources & quality	11: Economy & employment	12: Education & skills	13: Housing	14: Crime & safety	15: Equalities	16: Health & wellbeing	17: Access to services & facilities
A: Adopt NDSS	0	0	0	0	0	0	0	0	0	0	0	0	+	0	0	+	0
B: Do not adopt NDSS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Conclusions and Recommendations

5.31 As Option A is expected to result in higher internal space standards, it is expected to perform better than Option B, which reflects the likely baseline situation.

Other Housing Types

Housing for older people and people with specialist needs

5.32 Question 12 of the Issues and Options (Stage 2) document sets out the following approaches to plan for the needs of older people and those with specialist needs. More than one of these approaches could be taken forward:

- Option A: All dwellings built to M4 (2) requirement (accessible and adaptable).
- Option B: At least 10% new homes built to M4 (3) requirement (wheelchair adaptable) on large residential developments.

- Option C: Allocate specific sites for specialist housing.
- Option D: Require large residential developments to provide a specific amount of specialist housing.

Assessment results

5.33 All options are expected to have positive effects with regards to SA13: housing; SA15: equalities and SA16: health & wellbeing. This is because all options will provide for specialist housing to meet a wider range of housing needs than expected against the baseline. All options will increase equality between more able people and those with a disability and/or older people, who are likely to be less mobile, as all will lead to housing provision suitable for at least some people in these groups. In turn, provision of suitable housing is likely to have positive effects on health. All effects identified are considered to be minor, with the exception of a significant positive effect for SA15: equalities in relation to Option A. This is because this option would provide higher accessibility and adaptability standards to all new dwellings, therefore maximising the number of suitable homes for those with specialist needs and providing homes that will be suitable for the ageing population both now and in the future.

Table 5.6: SA scores for options for housing for older people and people with specialist needs

	1: Air quality	2: Biodiversity, flora & fauna	3: Climate change & energy	4: Historic environment	5: Flood risk	6: Geology & soils	7: landscape, townscape & visual	8: Materials & waste	9: Noise	10: Water resources & quality	11: Economy & employment	12: Education & skills	13: Housing	14: Crime & safety	15: Equalities	16: Health & wellbeing	17: Access to services & facilities
A: All M4(2)	0	0	0	0	0	0	0	0	0	0	0	0	+	0	+	+	0
B: 10% M4(3)	0	0	0	0	0	0	0	0	0	0	0	0	+	0	+	+	0
C: Older person sites	0	0	0	0	0	0	0	0	0	0	0	0	+	0	+	+	0
D: Residential care sites	0	0	0	0	0	0	0	0	0	0	0	0	+	0	+	+	0

Custom build housing

5.34 Question 13 of the Issues and Options (Stage 2) document sets out the following options for meeting the demand for self-build or custom build housing:

- Approach A: Allocate specific sites for self-build/custom build housing.
- Approach B: Set a requirement for large residential development sites to supply a proportion of serviced dwelling plots for sale to self-builders.

Assessment results

5.35 Both options are expected to have a minor positive effect on SA13: housing as they promote a wider variety of housing. As the Council has evidence that some people want to build custom

housing to meet their specific needs, minor positive effects have been identified for SA15: equalities and SA15: health & wellbeing. However, these effects are uncertain as it is unknown whether these sites would be in appropriate locations.

Table 5.7: SA scores for custom build housing options

	1: Air quality	2: Biodiversity, flora & fauna	3: Climate change & energy	4: Historic environment	5: Flood risk	6: Geology & soils	7: landscape, townscape & visual	8: Materials & waste	9: Noise	10: Water resources & quality	11: Economy & employment	12: Education & skills	13: Housing	14: Crime & safety	15: Equalities	16: Health & wellbeing	17: Access to services & facilities
A: Allocate for custom build	0	0	0	0	0	0	0	0	0	0	0	0	+	0	+?	+?	0
B: Do not allocate for custom build	0	0	0	0	0	0	0	0	0	0	0	0	+	0	+?	+?	0

Conclusions and Recommendations

- 5.36 The 'Other Housing Types' options have largely negligible effects, although potential for positive effects has been identified for SA objectives 13: housing, 15: equalities and 16: health and wellbeing. More positive effects are generally related to options that would provide a variety of housing types, as these would meet a range of needs for different people.
- 5.37 It is likely that the most sustainable approach to housing mix will be to include elements of the optional higher building standards and some custom build housing. Consideration should also be given to locating specialist housing within close proximity to local services and facilities and public transport links.

Gypsies, Travellers and Travelling Showpeople

- 5.38 This part of the Issues and Options (Stage 2) document recognises the need to provide for Gypsies, Travellers and Travelling Showpeople. It states that the Council do not currently have up to date evidence on these needs, therefore there are no options presented for assessment. Once options have been identified by the Council, these will be subject to SA.

Location of Housing Growth – Spatial Options

- 5.39 This section of the Issues and Options (Stage 2) document sets out seven options as to how growth can be accommodated across the Borough. The SA findings for these options are summarised below and the detailed assessment matrices for these are set out in **Appendix 6**.
- 5.40 The Council has confirmed that the options for growth are not mutually exclusive and a combination of options will be required to meet the Borough's future development requirements.

The assessments in **Appendix 6** and below focus on the effects of delivering the spatial pattern of development set out in each option. The effects of delivering the total amount of development required in Thurrock have been assessed separately through the assessment of quantum options, as presented in the '**Number of homes**' section above. For example, the assessment of SA3: climate change & energy has focused on the implications of the spatial patterns of development, such as proximity to existing facilities and public transport, rather than overall increases in carbon emissions that are likely to arise from a significant increase in vehicle movements as a result of housing and residents over the plan period.

5.41 The effects of each option will depend on a number of details, including location, size and the infrastructure to be provided. There is much uncertainty surrounding these factors at this stage, therefore the assessments rely on the following assumptions (taken from the site appraisal methodology in **Appendix 4**):

The larger an individual new housing allocation is, the less likely that it can be accommodated within the boundary of an existing settlement where it is likely to be closer to existing services and facilities. In general, the SA does not make any assumptions about new services and facilities that will be required as part of large new housing developments, with the following exceptions:

- Allocated housing sites with a capacity of at least 700 new dwellings are assumed to incorporate a new primary school and a bus stop.
- Allocated housing sites with a capacity of at least 3,000 new dwellings are assumed to incorporate at least one new primary school, a new secondary school, a bus stop, plus an appropriate level of community facilities.

5.42 In applying these assumptions, the SA has disregarded some of the detail provided in the Issues and Options (Stage 2) document in relation to the additional services, facilities and infrastructure to be provided under each option. This is because the Council has stated that it is not currently in a position to confirm whether the services, facilities and infrastructure included in some options could also be provided through the other options and therefore this information is not available on a consistent basis between options. As such, all assessments have been based only on the assumptions above and locational information in order to ensure that all options have been assessed in the same level of detail.

5.43 A summary of each option is included in **Table 5.8**. The figures presented in this table are not a definitive representation of development potential; they are indicative figures, based on evidence available to the Council at the time of assessment. These figures have been used to apply the assumptions above, to ensure consistency of assessment between sites. The Issues and Options (Stage 2) states that Village Expansions will be 'up to 1,500 homes'. However, the Council has provided LUC with an indicative scale of growth at each location, as reflected in **Table 5.8**. Similarly, the Council has provided LUC with indicative housing numbers that they anticipate being delivered at each of the Major Urban Extension options. These indicative numbers have been used to inform the SA in terms of applying the assumptions discussed above and are subject to change. Should the likely scale of housing growth at these locations change, the SA will be updated accordingly.

Table 5.8: Summary of housing growth options

Option	Scale of development (per site)
Option 1: Urban Intensification	Small (no figures given).
Option 2: Duty to Cooperate	This option proposes meeting at least part of Thurrock's development need outside of the Borough, rather than proposing a way of meeting need within the Borough.
Option 3: Green Belt Development New Settlement	At least 10,000 homes.

Option	Scale of development (per site)
Major Urban Extensions*	At least 1,500 homes.
Small Urban Extensions	50 to 1,500 homes.
Village Expansions	Bulphan – up to 1,500 homes. Horndon on the Hill – up to 400 homes. Orsett – up to 1,000 homes.
Isolated Site Allocations	Under 500 homes.

*The Issues and Options 2 provides further detail on areas being considered for Major Urban Extensions. These are listed in **Table 5.9** and have been assessed separately.

Table 5.9: Summary of Major Urban Extension options

Option	Scale of development
South Ockendon	10,000 – 12,000 homes.
Lakeside	2,500 homes.
Aveley	Over 2,100 homes.
Chadwell St Marys	3,000 – 5,000 homes.
East Tilbury	3,000 – 5,000 homes.
Corringham	Over 1,500 homes.
North Grays	1,500 homes.

Summaries of the appraisal findings for the housing growth options and Major Urban Extension options are presented below. Note that the assessment of 'Major Urban Extensions' focuses on the overall effects of focusing on delivering housing through major urban extensions, whereas the assessment of each Major Urban Extension in turn looks in more detail at the effects of development at the scales set out in **Table 5.9** in those particular locations. The SA findings for the Major Urban Extension options are summarised below and the detailed assessment matrices for these are set out in **Appendix 7**.

Assessment results – housing growth options

- 5.44 The Duty to Cooperate option is notably different from the rest as it does not identify potential locations for new development, as it would involve relying on neighbouring local authorities to bring forward development to meet Thurrock's housing needs. Negative effects associated with this option relate to the potential need to residents to travel into Thurrock for work. Effects against the environmental objectives are mostly assessed as being uncertain, as this option may maximise opportunities for avoiding development near sensitive environmental areas in Thurrock, but as the location of development in other local authorities is unknown, environmental impacts cannot be assessed.

SA1: Air quality

- 5.45 All options are expected to have minor negative effects for SA1: air quality as, while none are expected to lead to development within an AQMA, all development locations are likely to increase traffic and congestion on already congested routes, such as the A13 north of Grays, including

those running through the Borough's AQMAs. For the Urban Intensification option, this is likely to be mixed with a minor positive effect as this option is likely to minimise the need to travel.

SA2: Biodiversity, flora and fauna

- 5.46 Generally negative effects are expected with regards to SA2: biodiversity, flora & fauna, as all options except Duty to Cooperate will lead to development within proximity to existing biodiversity designations. These effects are expected to be significant for Major Urban Extensions, Small Urban Extensions and Isolated Site Allocations, as potential development areas fall within the relevant SSSI risk zones for the Thames Estuary and Marshes SPA and Ramsar site. Major Urban Extensions are likely to have the greatest impact as they will involve the greatest land take and introduction of new residents in this area. Development at other locations could also have the potential to result in adverse impacts on these internationally designated European sites and this will be considered in more detail through the HRA, once a preferred option has been selected.

SA3: Climate change & energy

- 5.47 The New Settlement, Major Urban Extensions, Small Urban Extensions and Village Expansion options are all assessed as having likely significant positive effects on SA3: climate change & energy as all are likely to provide developments that are individually of a scale that would be expected to provide new public transport services. Isolated Site Allocations is the only option assessed as having significant negative effects, as developments are not expected to be of the scale to provide new services and are likely to be remote from existing sustainable transport links.

SA4: Historic environment

- 5.48 Generally negative effects are expected with regards to SA4: historic environment, as all options except Duty to Cooperate will lead to development within proximity to existing historic environment assets. These negative effects are expected to be significant for Major Urban Extensions, Village Expansion and Isolated Site Allocations, due to the number, location and significance of existing designated assets in these areas and the relative scale of change in individual locations.

SA5: Flood risk

- 5.49 Generally negative effects are expected with regards to SA5: flood risk as large parts of the Borough are at high risk of flooding, with the result that many potential development areas were identified as having potential for development are at risk of flooding. Significant negative effects were identified with regards to New Settlement, Major Urban Extensions and Isolated Site Allocations options, as the Issues and Options (Stage 2) document identified potential development areas with a substantial area falling within Flood zone 3 or an area at high risk of surface water flooding for these options.

SA6: Geology & soils

- 5.50 Generally negative effects are expected with regards to SA6: geology & soils, with significant negative effects recorded for Major Urban Extensions, Small Urban Extensions, Village Expansion and Isolated Site Allocations, as these include potential development areas where best and most versatile land is likely to be lost to development.

SA7: landscape, townscape & visual

- 5.51 Generally negative effects are expected with regards to SA7: landscape, townscape & visual, with significant negative effects recorded for all options except Urban Intensification and Duty to Cooperate. This is because most of the undeveloped land in the Borough lies in an area of high or moderate-high sensitivity to housing development, even from development at a relatively small scale.

SA8: Materials & waste

- 5.52 Significant negative effects may occur as a result of Isolated Site Allocations, as some of the potential development locations identified lie adjacent to existing waste and/or minerals facilities. However, minor positive effects may occur in relation to Isolated Site Allocations and Urban

Intensification, as both could promote re-use of land. Other options are assessed as having minor negative uncertain or negligible effects against this SA objective.

SA9: Noise

- 5.53 All options except Duty to Cooperate are likely to have significant negative effects with regards to SA9: Noise, as all include potential development locations within proximity to the railway line and/or major roads that are significant sources of noise pollution. All effects are uncertain as the levels of noise experienced will depend on the exact location of development.

SA10: Water resources & quality

- 5.54 Most options are assessed as having minor negative effects with regards to SA10: water resources and quality, as most include potential development locations that either overlay areas of SPZ2 or are within 200m of a waterbody.

SA11: Economy & employment

- 5.55 Both positive and negative effects are identified with regards to SA11: economy & employment. Significant positive effects are only identified for Urban Intensification as this option is likely to lead to residential development within close proximity to existing employment opportunities. Increasing housing in urban areas could also result in higher footfall in town and local centres, therefore enhancing the vitality and viability of these centres, although this is mixed with minor negative effects as it could also relocate some employment uses to less accessible locations. Significant negative effects are only identified for Isolated Site Allocations, as many potential development areas are further than a 30 minute walk or 45 minute public transport time to existing employment opportunities.

SA12: Education & skills

- 5.56 Generally positive effects are recorded with regards to SA12: education & skills as most options would lead to development in proximity to educational facilities. Significant positive effects are likely with regards to New Settlement, Major Urban Extensions, Small Urban Extensions and Village Expansion are expected to have significant positive effects, as these are likely to provide development of a scale that would be expected to provide new schools. Significant negative effects (mixed with minor positive effects) are only recorded with regards to Isolated Site Allocations, as many potential development areas are further than a 20 minute walk from a primary school and a 30 minute walk or public transport time from a secondary school.

SA13: Housing

- 5.57 All options would have positive effects for SA13: housing. For most options, these effects are likely to be significant as all options could provide housing in areas that currently have high barriers to housing and services. For Urban Intensification, these effects are assessed as being minor, as the Issues and Options (Stage 2) document suggests that the amount of development that could be brought forward through this option is limited.

SA14: Crime & safety

- 5.58 Negligible effects are expected with regards to SA14: crime & safety as this is more likely to be influenced by the design and layout of development.

SA15: Equalities

- 5.59 Urban Intensification, Major Urban Extensions, Small Urban Extensions and Village Expansion are likely to have minor positive effects for SA15: equalities, as all are expected to make services and facilities more accessible to those with limited mobility, and help to connect people with social networks, such as faith groups. Isolated Site Allocations is expected to have minor negative effects, due to the isolated nature of sites likely to come through this option. The New Settlement option is expected to have mixed minor positive and minor negative effects, as this is expected to provide new facilities and public transport links but many residents are still likely to need to commute by car, which may disadvantage the less mobile or those unable to drive.

SA16: Health & wellbeing

5.60 Generally mixed positive and negative effects are expected with regards to SA16: health & wellbeing. Significant positive effects are expected with regards to New Settlement, Major Urban Extensions and Village Expansion options, as these are likely to be within close proximity to existing health and recreation facilities, and the Major Urban Extension and New Village options are expected to be of a scale as to provide new greenspace. Significant negative effects are recorded against Urban Intensification and Major Urban Extensions, as these options could lead to loss of existing greenspace.

SA17: Access to services & facilities

5.61 Urban Intensification, New Settlement and Major Urban Extension options are expected to result in significant positive effects for SA17: access to services & facilities, as development under these options is likely to be within close proximity to existing services and facilities, or to provide new community facilities. Minor negative effects are recorded for all other options, except Duty to Cooperate, as existing services and facilities are likely to be less accessible from potential development locations under these options.

Table 5.10: SA scores for housing growth options

	1: Air quality	2: Biodiversity, flora & fauna	3: Climate change & energy	4: Historic environment	5: Flood risk	6: Geology & soils	7: landscape, townscape & visual	8: Materials & waste	9: Noise	10: Water resources & quality	11: Economy & employment	12: Education & skills	13: Housing	14: Crime & safety	15: Equalities	16: Health & wellbeing	17: Access to services & facilities
Urban Intensification	+? /-?	+? /-	+	+? /-?	-?	+/-?	+? /-?	+	+/-?	-	++?/-?	+?	+	0	+	+? /--	++?
Duty to Cooperate	-?	?	-?	?	?	?	?	?	?	?	-?	?	++?	0	0	-?	?
New Settlement	-?	-?	++/-	-?	--	-	--	0	--?	-	+?/-	++	++	0	+/-	++/-	++
Major Urban Extensions	-?	--	++	--?	--?	--	--	-?	--?	-?	+	++	++	0	+	++/-	++?
Small Urban Extensions	-?	--?	++?	-?	-?	--	--?	-?	--?	-?	+	++?	++?	0	+	+/-	-?
Village Expansion	-	-?	++	--?	-	--?	--	0	--?	-?	+	++/-	++	0	+	++/-	-?
Isolated Site Allocations	-	--?	--?	--?	--?	+/-?	--?	+/-?	--?	-?	+?/-?	+?/-?	++?	0	-	+/-	-

Conclusions and recommendations

- 5.62 Most effects arising from the Duty to Co-operate option are uncertain, as it is not known where development will come forward. In the absence of mitigation, significant negative (and positive) effects are likely to occur as a result of development of a large quantity of housing in any location. As such, the assessment for the Duty to Co-operate option should be considered with caution, as there is a high degree of uncertainty as to where such development would be located and whether such locations would be sustainable.
- 5.63 Of the other options, Urban Intensification performs best in sustainability terms, although again this is associated with a high level of uncertainty. The remaining options are all assessed as having primarily negative effects against the environmental SA objectives and more positive effects with regards to economic and social objectives. Although the amount of development associated with each of these options varies substantially, they are all of a scale at which some negative environmental impacts are likely to be inevitable, but they will provide at least some new services and facilities. Again, there is a high degree of uncertainty associated with most effects, as the assessment was based on broad potential locations for development, so effects will depend on the actual locations where development comes forward. In addition, development may incorporate mitigation measures, but as there is no certainty on what measures would come forward on these sites, such measures have not been taken into account at this stage of the plan-making process (with the exception of the assumptions made about infrastructure provision).
- 5.64 Aside from Urban Intensification, the New Settlement option arguably performs best. While this area is isolated from the main development areas of Thurrock, it is in a less sensitive area in environmental terms. The Isolated Site Allocations option arguably performs worst, as the isolated nature of these sites are likely to result in difficulty accessing services and a reliance on car travel without the advantages of avoiding sensitive environmental areas.
- 5.65 In line with national policy, Urban Intensification should make up part of the development strategy, although valuable urban green spaces should be protected. Further work should be undertaken to identify the impacts of the Duty to Co-operate option, if this is progressed. For any option the Local Plan should ensure that environmental impacts are minimised as far as possible and that sufficient infrastructure is provided to meet the needs of the new development and preferably the wider community.
- 5.66 The approach taken forward by the Council will likely involve a combination of these options. Once the Council has identified a preferred approach from these options, this will be subject to SA.

Assessment results – Major Urban Extension options

SA1: Air quality

- 5.67 All options are expected to have minor negative effects for SA1: air quality, as all potential development locations are likely to substantially increase traffic and congestion on already congested routes, such as the A13 north of Grays, due to the size of development. For many options, this includes a likely increase in traffic through existing AQMAs, particularly those around Grays and Purfleet. These effects are uncertain for the South Ockendon, Aveley, Chadwell St Marys, East Tilbury and Corringham options, dependent on the exact location and layout of development and subsequent behaviours.

SA2: Biodiversity, flora and fauna

- 5.68 Significant negative effects are expected for nearly all options with regards to SA2: biodiversity, flora & fauna, as nearly all options will lead to development in areas containing existing biodiversity designations, which could be lost to development directly or degraded through urban edge effects. Minor negative effects are expected for the Corringham Major Urban Extension option as this area does not contain existing biodiversity designations, but is in proximity to existing biodiversity designations that could be degraded through urban edge effects. Once a preferred approach is selected, the HRA will consider potential effects on internationally designated biodiversity sites, such as the Thames Estuary Marshes SPA and Ramsar site, in more detail.

SA3: Climate change & energy

- 5.69 All options are expected to have significant positive effects for SA3: climate change and energy, as all options are expected to be of a scale that would result in new public transport infrastructure.

SA4: Historic environment

- 5.70 All options are expected to have negative effects with regards to SA4: historic environment, as all options will lead to development within proximity to existing historic environment assets. These negative effects are expected to be significant for the South Ockendon, Aveley, Chadwell St Mary, East Tilbury and North Grays options as the proposed development areas of these options contain designated historic environment assets that could be directly affected by development. All effects are uncertain, as they depend on the exact location and design of development.

SA5: Flood risk

- 5.71 The Major Urban Extension options at Aveley and North Grays are expected to have negligible effects with regards to SA5: flood risk, as the proposed development areas of these options do not lie within Flood Zones 2 or 3 or in areas of high risk to surface water flooding. These effects are uncertain however, as the potential development areas comprise large areas of greenfield land, the development of which could increase flood risk. The remaining options are expected to have uncertain significant negative effects, as their proposed development areas lie within Flood Zones 2 or 3, however these areas also benefit from flood defences. Additionally, many are within areas of high risk to surface water flooding.

SA6: Geology & soils

- 5.72 Negative effects are identified for all options with regard to SA6: Geology and soils. Significant negative effects are identified for nearly all options, as the proposed development areas of these options include Grade 1 and/or Grade 2 agricultural land that could be lost to development. Many of these areas also contain historic landfill sites that could result in adverse effects on development, due to mobilisation of pollutants from contaminated land and subsidence. Minor negative effects are identified for the Corringham Major Urban Extension Option as the proposed area for development includes Grade 3 agricultural land that could be lost to development. Minor negative effects were also identified for the Lakeside Major Urban Extension Option as although the proposed area for development does not contain agricultural land, the area does contain areas of historic landfill sites.

SA7: landscape, townscape & visual

- 5.73 All options are expected to have negative effects with regards to SA7: landscape. The Lakeside Major Urban Extension option is expected to have uncertain significant negative effects, as the proposed area of development is partially within a Landscape Character Area that is of low-moderate sensitivity and partially within a Landscape Character Area this is of high sensitivity to the scale of development proposed. Significant negative effects are expected for the remainder of options as the proposed development areas of these options are within Landscape Character Areas of moderate to high or high sensitivity to the scales of development proposed.

SA8: Materials & waste

- 5.74 Over half of the options are expected to have negligible effects for SA8: materials & waste. Significant negative effects are identified for the East Tilbury Major Urban Extension, as the potential area for development contains active waste sites. Uncertain minor negative effects are identified for the Chadwell St Mary and Aveley options as the Chadwell St Mary potential development area contains a minerals extraction site (being worked prior to use as an agricultural reservoir), and the Aveley potential development area contains a recently closed and restored / ceased for alternative use landfill site.

SA9: Noise

- 5.75 All options are likely to have significant negative effects with regards to SA9: Noise, as all options propose development close to roads and/or railway lines that are significant sources of noise pollution. All effects are uncertain as the levels of noise that are of concern do occur only in

proximity to the roads and railway lines and depend on the exact location, layout and design of development.

SA10: Water resources & quality

- 5.76 Most options are assessed as having minor negative effects with regards to SA10: water resources and quality, as most include potential development locations that either include areas of Source Protection Zone 2 or are within 200m of a waterbody. These effects are uncertain, dependent on the exact location and layout of development. Negligible effects are identified for the North Grays Major Urban Extension option as the proposed area for development is located outside of a Source Protection Zone and further than 200m from a water body.

SA11: Economy & employment

- 5.77 Minor positive effects are identified for all options and all options are within 30 minutes walking or public transport time to existing employment sites. Additionally, all options are of a scale that would provide community facilities and/or a school, which may generate new jobs, although these are likely to be limited in number.

SA12: Education & skills

- 5.78 All options are expected to deliver significant positive effects with regards to SA objective 12: education & skills, as all options are of a scale that would result in provision of new educational facilities.

SA13: Housing

- 5.79 All options are identified to have positive effects with regards to SA13: housing. For most options, these effects are likely to be significant as development options could provide housing in areas that currently have high barriers to housing and services. However, the options at Aveley and North Grays are assessed as having minor positive effects, as they would provide new housing but this is not expected to be in an area with high barriers to housing and services.

SA14: Crime & safety

- 5.80 Negligible effects are expected for all options with regards to SA14: crime & safety as this is more likely to be influenced by the design and layout of development.

SA15: Equalities

- 5.81 Minor positive uncertain effects are expected for all options as all options are expected to be of a scale that would provide community facilities and/or public transport infrastructure, which may provide opportunities to meet specific needs of some parts of the community, including the elderly, disabled, possibly expectant mothers, and others with limited mobility to get around, and the provision of community facilities and faith facilities may benefit some people with protected characteristics.

SA16: Health & wellbeing

- 5.82 All options are expected to have mixed effects with regards to SA16: health & wellbeing. Significant positive effects are expected for the South Ockendon, Chadwell St Mary and East Tilbury options as these are expected to be of a scale that would provide some additional green space to serve new residents. The remaining development options are expected to have uncertain significant effects, as all sites either contain or are in proximity to existing green spaces, recreation facilities and/or footpaths which could provide recreation opportunities. Uncertain minor negative effects are also expected for the Corringham Major Urban Extension option, as the majority of the potential area for development is located further than a 10 minute walk or public transport time to a healthcare facility and a fruit and vegetable retailer. The majority of the potential areas for development for the other options are also located further than a 10 minute walk or public transport time to a healthcare facility and a fruit and vegetable retailer, however the proposed development areas of these options also contain existing green spaces that could be lost to development, and as such uncertain significant negative effects are also likely.

SA17: Access to services & facilities

5.83 All of the options are expected to have positive effects with regards to SA17: Access to services and facilities as all options are expected to be of a scale that would provide community facilities and/or public transport infrastructure, which may improve access to services and facilities. The South Ockendon, Chadwell St Mary and East Tilbury options are expected to have significant positive effects as these options are expected to be of a scale that would provide community facilities within areas that currently have high barriers to housing and services.

Table 5.11: SA scores for Major Urban Extension options

	1: Air quality	2: Biodiversity, flora & fauna	3: Climate change & energy	4: Historic environment	5: Flood risk	6: Geology & soils	7: landscape, townscape & visual	8: Materials & waste	9: Noise	10: Water resources & quality	11: Economy & employment	12: Education & skills	13: Housing	14: Crime & safety	15: Equalities	16: Health & wellbeing	17: Access to services & facilities
South Ockendon	-?	--	++	--?	--?	--	--	0	--?	-?	+	++	++	0	+?	++/- -?	++
Lakeside	-	--	++	-?	--?	-	--?	0	--?	-?	+	++	++	0	+?	+++ /--?	+
Aveley	-?	--	++	--?	0?	--	--	-?	--?	-?	+	++	+	0	+?	+++ /--?	+
Chadwell St Marys	-?	--	++	--?	--?	--	--	-?	--?	-?	+	++	++	0	+?	++/- -?	++
East Tilbury	-?	--	++	--?	--?	--	--	--	--?	-?	+	++	++	0	+?	++/- -?	++
Corringham	-?	-	++	-?	--?	-	--	0	--?	-?	+	++	++	0	+?	+++ /--?	+
North Grays	-	--	++	--?	0?	--	--	0	--?	0	+	++	+	0	+?	+++ /--?	+

Conclusion and recommendations

5.84 Due to the scale of Major Urban Extensions and the uncertainty about their exact locations, all options perform in a similar way. Generally, negative effects are expected with regards to environmental SA objectives and positive effects are expected with regards to economic and social SA objectives. It is difficult to identify best performing options as, in general, those with the most significant negative effects also have the highest number of significant positive effects. The Major Urban Extension at Corringham arguably performs best, as it is assessed as having significant negative effects against three SA objectives and significant positive effects against four SA objectives. However, decisions should not be made by simply adding up significant negative and positive effects, as some sustainability objectives may have a higher priority than others for the Borough, effects may be at different magnitudes and scales, or different sites may have

differing abilities to avoid or mitigate certain effects in a way that is beyond the scope of the SA methodology.

- 5.85 Many of the uncertainties identified could be addressed by including design and layout specification in any allocation policies, such as requiring a buffer between any development and major roads or railways. In addition, allocations policies could explicitly state that development should focus on equality of opportunity in terms of providing for those with protected characteristics.

Implications of the Lower Thames Crossing (LTC)

- 5.86 The implementation of the Lower Thames Crossing (LTC) would significantly alter the baseline against which the Local plan policies will be appraised. There remains uncertainty at this stage about the alignment and design of the LTC. While the LTC is likely to have some positive sustainability effects, a number of existing sustainability issues, notably health and well-being, are likely to be exacerbated.
- 5.87 Given this uncertainty, the assessments above do not take into account a future scenario where the LTC has been built and these are instead discussed here. Note this is a consideration of how the assessment of the spatial options would change with the LTC in place, not an assessment of development of the LTC itself.
- 5.88 Implementation of the LTC is most likely to affect the following objectives in terms of the assessment results presented above:
- SA1: air quality.
 - SA3: climate change & energy.
 - SA7: landscape, townscape & visual.
 - SA9: noise.
 - SA16: health and wellbeing.
- 5.89 All options are assessed as having minor negative effects on SA1: air quality. With the LTC in place, there may be a greater risk of development contributing to congestion and air quality issues in and around Thurrock, particularly for options including land in the west of the Borough. The assessment of the New Settlement Option and Major Urban Extension at Corringham are least likely to be affected, due to their locations further from the LTC. Village expansions at Bulphan and Horndon on the Hill and many Isolated Site Allocation options are also at low risk of being affected. Conversely, the LTC is expected to relieve some of the congestion from the Dartford Crossing, which could lead to less congested roads around options close to the M25, such as Major Urban Extensions and Small Urban Extensions around Aveley, Lakeside and to the west of South Ockendon. However, this is unlikely to affect the current scoring as development would still lead to an increase in traffic in the Borough.
- 5.90 The changes to patterns of traffic and congestion described above with regards to air quality are similarly likely to affect emissions of greenhouse gases associated with vehicular transport. However, assessment of SA3: climate change & energy focuses on the availability of public transport as an alternative to travel by car. The LTC is not anticipated to significantly affect public transport services, therefore no changes are anticipated to the assessments of SA3.
- 5.91 Implementation of the LTC will alter the wider landscape character as the road will be a prominent feature in the landscape. This could mean that some areas become less sensitive to other development in landscape terms as a result, which could result in a less negative score for SA7: landscape, townscape & visual for some options. This is most likely to apply to areas close to the LTC route, including Major Urban Extensions and Small Urban Extensions to the north of South Ockendon, Grays, Chadwell St Mary and to the west of East Tilbury.
- 5.92 The LTC could introduce a new, significant source of noise pollution in both the construction and operational phases, adding to the negative effects already identified against SA9: noise. Again this is most likely to apply to areas close to the LTC route, including Major Urban Extensions and

Small Urban Extensions to the north of South Ockendon, Grays, Chadwell St Mary and to the west of East Tilbury.

- 5.93 Development of the LTC is likely to have significant implications for the assessment of SA16: health and wellbeing. The LTC would increase traffic in the area leading to increases in air pollution and noise disturbance. Options close to the LTC route, including Major Urban Extensions and Small Urban Extensions to the north of South Ockendon, Grays, Chadwell St Mary and to the west of East Tilbury, would likely be significantly affected by the increased noise disturbance from the LTC, which could affect the wellbeing of residents. Increases in vehicle movements in the area would lead to increases in air pollution, which is linked to health issues, such as respiratory problems, and could therefore lead to poorer health in residents living near the route.
- 5.94 In addition, development of the LTC could sever connections to the countryside via public rights of way. This would limit recreational opportunities for existing residents and those of any new development. This could exacerbate existing issues in Thurrock with regards to high levels of obesity and low levels of physical activity, resulting in further negative effects on health and wellbeing.
- 5.95 All effects described above are uncertain, as the final layout and design, including mitigation measures, for the LTC have not been finalised.

6 Sustainability Appraisal Findings for the Level of Growth Options – Employment

- 6.1 This section of the Issues and Options (Stage 2) document explains that Thurrock plays an important role in providing employment land across South Essex. There is an over-supply in the employment land required over the plan period, but much of this capacity is tied up in strategic land holdings at London Gateway, Thames Enterprise Park and Port of Tilbury related to ports and logistics development.

Allocating Employment Sites

- 6.2 Question 21 of the Issues and Options (Stage 2) document presents the following policy options for allocating employment sites and clarifies that they are not mutually exclusive:
- Option 1: Allocate sites specifically for strategic distribution and warehousing needs (assumed these are likely to be large, out of town sites).
 - Option 2: Allocate sites to encourage geographical clusters of specialist employment uses.
 - Option 3: Allocate all new sites for the range of B classes uses (business, general industry and warehousing).
 - Option 4: Allocate employment sites specifically for non-B8 uses (uses other than storage or distribution).
 - Option 5: Identify additional town centre mixed use development sites.
- 6.3 The full assessment results for these options are presented in **Appendix 8** and a summary is given below.

Assessment results

- 6.4 Options 1, 3 and 4 are assessed as having minor negative uncertain effects against SA1: air quality and SA3: climate change & energy, as they are likely to result in additional traffic movements and congestion in the Borough. In addition, both options 3 and 4 could include industrial processes that result in air pollution or greenhouse gas emissions in themselves.
- 6.5 Option 1 is assessed as having minor negative uncertain effects on SA2: biodiversity as it is likely to require development of large areas of greenfield land, whereas negligible effects are recorded for option 5 as its urban locations are likely to be less sensitive in terms of biodiversity.
- 6.6 As option 5 is likely to lead to development in urban areas, development is more likely to be within the areas of high flood risk that coincide with many of the Borough's settlements. As such, potential significant negative effects are recorded for SA5: flood risk, but this is uncertain as it depends on the exact location of development.
- 6.7 The urban location of option 5 may also encourage re-use of previously developed land, leading to minor positive effects on SA6: geology & soils and SA8: materials and waste.
- 6.8 Option 1 is the only option identified as having potential significant negative effects for SA7: landscape, townscape & visual, as it is likely to lead to development in out of town locations and all landscape character types in the Borough are sensitive to this type of development. Conversely, minor positive effects are expected for option 5, as this may contribute to town centre regeneration.
- 6.9 All options, except Option 5, are assessed as having minor negative effects for SA9: noise, as all are expected to either increase noise pollution or be in proximity to existing sources of noise

pollution. However, for Option 2 these are mixed with minor positive effects, as clustering may reduce traffic travelling between different sites. Option 5 is assessed as having negligible uncertain effects, as the option is not expected to lead to development that increases noise disturbance.

- 6.10 All options are expected to have positive effects for SA11: economy & employment, as all would contribute to provision of new employment opportunities. This positive effect is likely to be significant for options 2, 3 and 4 as they are expected to promote diversification of the economy and employment opportunities. Minor positive effects are mixed with minor negative effects for option 1, as employment opportunities coming forward under this option are less likely to be accessible by sustainable modes of transport. This also means that the sites may not be accessible to the less mobile, therefore leading to minor negative effects with regards to SA15: equalities.
- 6.11 In addition, option 2, 3 and 4 may stimulate demand for and contribute to more specialist training and skills in the Borough, resulting in minor positive uncertain effects in relation to SA12: education & skills.
- 6.12 Options 2, 3 and 4 would contribute to diversifying the employment offer in Thurrock, they may increase the number of suitable job opportunities for a wider range of people, therefore boosting jobs satisfaction and quality of life. As such, these options are expected to have minor positive effects for SA15: equalities and SA16: health & wellbeing. Option 5 is likely to lead to employment in more accessible locations, leading to minor positive effects on SA15: equalities.
- 6.13 The levels of uncertainty associated with these options make it difficult to identify a best performing option, although the assessments suggest that some diversification of the economy in Thurrock would be beneficial.

Table 6.1: SA scores for policy options for allocating employment sites

	1: Air quality	2: Biodiversity, flora & fauna	3: Climate change & energy	4: Historic environment	5: Flood risk	6: Geology & soils	7: landscape, townscape & visual	8: Materials & waste	9: Noise	10: Water resources & quality	11: Economy & employment	12: Education & skills	13: Housing	14: Crime & safety	15: Equalities	16: Health & wellbeing	17: Access to services & facilities
1: Distribution / warehousing sites	-	-?	-	?	0?	?	--	?	-?	?	+/-?	0	0	0	-	0	0
2: Encourage clustering	+?	?	+?	?	?	?	?	?	+?/-?	?	++	+?	0	0	+	+	0
3: New sites for B uses	-?	?	-?	?	?	?	?	?	-?	?	++	+?	0	0	+	+	0
4: Non-B8 use sites	-?	?	-?	?	?	?	?	?	-?	?	++	+?	0	0	+	+	0
5: Town centre sites	+	0	+	?	--?	+	+	+	0?	?	+	0	0	0	+	0	0

Conclusions and recommendations

- 6.14 There is much uncertainty associated with the assessment of these options, as many effects depend on the exact nature, location and design of development coming forward. As such, it is not possible to identify a best performing option. However, those options that would contribute to diversification of employment opportunities, particularly options 2, 3 and 4 are expected to have more positive effects on SA objective 11: economy & employment and SA objective 12: education & skills.

Existing Employment Areas

Uses in existing employment areas

- 6.15 This section of the Issues and Options (Stage 2) document discusses the existing tiered approach to employment sites in the Borough, but recognises that the 2011 General Permitted Development order has resulted in relaxation of planning rules regarding change of use from offices and warehousing to residential use. Question 22 presents two options for ensuring existing employment areas continue to meet a diverse range of business needs:
- A: Restrict the range of uses and activities in existing employment areas to B1 (business), B2 (general industrial) or B8 (storage or distribution) uses.
 - B: Designate selected employment areas in whole, or in part, for non-business class users.

Assessment results

- 6.16 Option A is largely expected to reflect the baseline situation, although it has been assumed that any restrictions would apply to new/redevelopment only. As such, effects are generally assessed as being negligible. Option A may help to ensure space for more traditional employment uses in the Borough and therefore help to support the local economy, resulting in minor positive effects for SA11: economy & employment. However, these effects are uncertain as this option may restrict diversification of the economy.
- 6.17 Option B could have positive effects for SA1: air quality, SA3: climate change & energy and SA17: access to services & facilities if designating employment areas in part for non-business class users, as this greater mix of uses could improve accessibility for workers to a range of services and facilities, therefore reducing the need to travel. For example, having childcare facilities, shops, leisure uses or accommodation in employment areas could reduce the distance workers need to travel to these, resulting in minor positive effects. However, it is unknown what 'non-business class uses' would come forward, therefore these effects are uncertain. In terms of SA11: economy & employment, this option could help diversify the employment offer in Thurrock, resulting in minor positive effects. Alternatively, this option could reduce the amount of land available for larger industries, therefore resulting in minor negative effects. Both the minor positive and minor negative effects are uncertain.

Table 6.2: SA scores for existing employment site options

	1: Air quality	2: Biodiversity, flora & fauna	3: Climate change & energy	4: Historic environment	5: Flood risk	6: Geology & soils	7: landscape, townscape & visual	8: Materials & waste	9: Noise	10: Water resources & quality	11: Economy & employment	12: Education & skills	13: Housing	14: Crime & safety	15: Equalities	16: Health & wellbeing	17: Access to services & facilities
A: B1, B2 or B8 only	0	0	0	0	0	0	0	0	0	0	+	0	0	0	0	0	0
B: Designate sites for non-business class	+	0	+	0	0	0	0	0	0	0	+	0	0	0	0	0	+

Bad neighbour uses

- 6.18 Question 23 of the Issues and Options (stage 2) document asks whether the Council should develop a programme for 'lifting and shifting' bad-neighbour uses to alternative locations. This implies there are two options for the Local Plan:
- A: Develop a programme for 'lifting and shifting' bad-neighbour uses to alternative locations.
 - B: Do not develop a programme for 'lifting and shifting' bad-neighbour uses to alternative locations.

Assessment results

- 6.19 Option B would not result in any change to the baseline, therefore effects would be negligible against all SA objectives.
- 6.20 Option A could result in people having to travel further to work, or employment opportunities being located in less accessible locations, therefore resulting in minor negative uncertain effects for SA1: air quality, SA3: climate change & energy, SA11: economy and employment and SA15: equalities. However, relocation of bad neighbour employment uses could result in improved local amenity, including redevelopment of employment sites in a way that enhances townscape and visual amenity, reduces noise disturbance, and improves road safety resulting in positive effects on SA7: landscape, townscape & visual, SA9: noise, and SA16: health and wellbeing. The effect on SA7 is uncertain, as the effects of relocating employment uses also depend on where they are relocated to.
- 6.21 Uncertain effects are recorded with regards to SA2: biodiversity & geodiversity, SA4: historic environment, SA5: flood risk, SA6: geology & soils, SA8: materials & waste and SA10: water resources & quality as effects on these objectives depend on where such uses are located to, which is unknown.
- 6.22 Relocation of employment uses under Option A could promote regeneration of an area, which has potential to reduce crime and increase safety, although this is uncertain, resulting in minor positive uncertain effects on SA14: crime and safety.

Table 6.3: SA scores for options for bad neighbour uses

	1: Air quality	2: Biodiversity, flora & fauna	3: Climate change & energy	4: Historic environment	5: Flood risk	6: Geology & soils	7: landscape, townscape & visual	8: Materials & waste	9: Noise	10: Water resources & quality	11: Economy & employment	12: Education & skills	13: Housing	14: Crime & safety	15: Equalities	16: Health & wellbeing	17: Access to services & facilities
A: Develop programme	-?	?	-?	?	?	?	+	?	+	?	-?	0	0	+	-?	+	0
B: Do not develop programme	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Conclusions and recommendations

- 6.23 The options for existing employment uses are largely expected to be negligible in terms of implications for SA. Similarly to the 'allocating employment sites' options, allocating non-business class uses is expected to have positive effects by diversifying the employment offer in Thurrock. Developing a programme of lifting and shifting bad neighbour uses is likely to have a mix of minor positive and minor negative effects, although many effects, particularly with regards to the environmental criteria, will depend on where such uses are moved to. If a 'lift and shift' programme is implemented, the Local Plan could include conditions for where businesses are to be relocated in order to avoid negative environmental effects and ensure these are still accessible by sustainable modes of transport.

Digital Infrastructure

- 6.24 Question 24 of the Issues and Options (stage 2) document suggests two approaches to promoting provision of high quality digital infrastructure:
- A: Require the direct provision of full fibre connections to all new residential and business developments.
 - B: Target Section 106 or CIL contributions collected from all forms of new development at supporting the provision of enhanced digital infrastructure in Thurrock.

Assessment results

- 6.25 Both options are likely to have minor positive uncertain effects on SA1: air quality and SA3: climate change & energy as provision of enhanced digital infrastructure may enable and encourage working from home, therefore reducing traffic movements and associated emissions of air pollutants and greenhouse gases.
- 6.26 By improving resident's ability to work and study from home, both options are likely to have minor positive effects on SA11: economy & employment and SA12: education & skills. In addition, improved digital infrastructure may also be beneficial for those with specialist needs work from home, or may help them by allowing them to do their shopping, banking and accessing other services from home, therefore having minor positive effects against SA15: equalities. Generally, there is more uncertainty associated with Option B, as the requirement is not as strong

as Option A and there is less certainty as to what digital infrastructure enhancements would come forward.

Table 6.4: SA scores for digital infrastructure options

	1: Air quality	2: Biodiversity, flora & fauna	3: Climate change & energy	4: Historic environment	5: Flood risk	6: Geology & soils	7: landscape, townscape & visual	8: Materials & waste	9: Noise	10: Water resources & quality	11: Economy & employment	12: Education & skills	13: Housing	14: Crime & safety	15: Equalities	16: Health & wellbeing	17: Access to services & facilities
A: Require full fibre connections	+	0	+	0	0	0	0	0	0	0	+	+	0	0	+	0	0
B: Target CIL / s106 at digital infrastructure	+	0	+	0	0	0	0	0	0	0	+	+	0	0	+	0	0

Conclusions and recommendations

- 6.27 The effects of implementing options A and B are likely to be similar, although there is more uncertainty associated with Option B, as the requirement is not as strong as Option A and there is less certainty as to what digital infrastructure enhancements would come forward. If Option B is taken forward, the relevant policy could specify the digital infrastructure that should be prioritised.

7 Sustainability Appraisal Findings for the Level of Growth Options – Retail and Leisure

- 7.1 This section of the Issues and Options (Stage 2) document sets out the challenges facing town centres and retail destinations within Thurrock and across the country and options for addressing these.

Lakeside

Location of future comparison shopping and leisure development

- 7.2 Question 25 of the Issues and Options (Stage 2) document asks whether Lakeside should continue to be the principal focus for new comparison shopping and leisure over the plan period. This implies there are two options for the Local Plan:

- A: Focus new comparison shopping and leisure development at Lakeside (assumed to be on brownfield land as much of Lakeside is previously developed).
- B: Deliver new comparison shopping and leisure development elsewhere (assumed this would be within existing town centres on brownfield land).

Assessment results

- 7.3 Focusing comparison shopping and leisure development at lakeside is expected to further increase traffic through existing AQMAs in the area, particularly at North Stifford, Chafford Hundred and on other routes to Lakeside, leading to minor negative effects for SA1: air quality for Option A. A focus on development elsewhere (Option B) is considered less likely to increase traffic in AQMAs, therefore negligible effects are expected, but this is uncertain as effects depend on the exact location of development.
- 7.4 New development at Lakeside would be adjacent to the Arena Essex Local Wildlife site. As such, there is potential for minor negative effects for SA2: biodiversity, flora & fauna for Option A. Assuming that Option B would focus on existing town centres, development could still occur within close proximity to designated biodiversity sites, although it is unlikely that this would lead to loss of existing sites or be within a relevant SSSI IRZ for internationally designated sites. As such, minor negative effects are expected for Option B, although these are uncertain depending on the exact location of development.
- 7.5 Lakeside is served by both frequent and less frequent bus services along the Arterial Road West Thurrock, particularly the 100, which serves Grays and the 370, which serves South Ockendon and North Stifford, therefore it is accessible by public transport, although the extent to which this is used depends on where visitors are coming from. There are also large car parks at Lakeside. Concentrating retail and leisure development in a single area could increase car use in the Borough, as many residents are likely to drive to Lakeside, particularly those in the east and north of the Borough. As such, negative effects are expected for Option A against SA3: climate change & energy. Alternatively, focusing development elsewhere is likely to lead to more dispersed development of retail and leisure, which means for many people these facilities, will be closer to home, thus reducing the need to travel. Town centres also tend to be well served by public transport. As such, minor positive effects are recorded for Option B, although these are uncertain as effects depend on the exact location of development.
- 7.6 There are no designated historic assets in and around Lakeside and a very limited number of Essex Heritage Conservation records in the area. As such, Option A is expected to have negligible effects for SA4: historic environment. There are also generally limited historic assets in town centres in and around Thurrock, although there are a number of listed buildings in Aveley centre

and Grays. As such, minor negative effects have been recorded for Option B, although these are uncertain as they depend on the exact location of development.

- 7.7 Lakeside lies within Flood Zone 3, although the area benefits from flood defences. Given that much of Lakeside consists of previously developed land, and therefore redevelopment will not necessarily have a significant effect on rainfall infiltration and surface water flood risk, minor negative uncertain effects have been recorded for Option A with regards to SA5: flood risk. Other town centres are at a lesser risk of flooding, although there is an area of Flood Zone 3 (benefitting from flood defences) in Grays. As focusing development elsewhere provides an opportunity to locate development outside of Flood Zone 3, negligible effects are recorded for Option B, with uncertainty to reflect that effects depend on the exact location of development.
- 7.8 As both options are likely to be located on non-agricultural land and consist primarily of redeveloping brownfield land, effects on SA 6: geology & soils are expected to be negligible. Similarly, effects on SA7: landscape, townscape and visual are likely to be negligible, although this is uncertain as it depends on the exact location of development under Option B and the design of development under both Options A and B.
- 7.9 Both Options A and B are expected to include reuse of brownfield land and neither are likely to be located within proximity of operational waste facilities, therefore minor positive uncertain effects are recorded for both options against SA8: materials & waste. The uncertainty relates to the exact location of development and whether it will reuse existing resources.
- 7.10 Lakeside is affected by high levels of noise disturbance from the A1306 and the A126, which may affect the amenity of shoppers and workers at the site, although focusing development at Lakeside is not expected to affect sensitive receptors in terms of noise itself. There is also some potential for retail and leisure development elsewhere to be affected by existing noise disturbance. As retail and leisure uses are considered less sensitive, the effects of both options on SA9: noise are expected to be minor negative. This is uncertain for Option B, as it depends on the exact location of development.
- 7.11 Lakeside includes a small area within SPZ2 and contains the lake, both of which could be adversely affected by additional development at the site, although both are already likely to be affected by existing development. In general, town centre sites are not within SPZ 1 or 2, although Grays town centre is in proximity to the Thames, although this is not easily accessible from the town centre due to flood defences. Overall Option A is expected to have a minor negative uncertain effect on SA10: water resources & quality and Option B is likely to have a negligible uncertain effect.
- 7.12 Option A could promote inward investment by further promoting Lakeside as a regional shopping and leisure hub. However, this could result in a lack of investment in town centres, contributing to a decline in local and town centres. As such, significant positive and minor negative effects are recorded against SA11: economy & employment, for Option A. Option B is likely to result in redevelopment of town centres and helping to support and promote their role, leading to minor positive effects.
- 7.13 The potential accessibility issues discussed with regards to SA3 are also reflected in the scoring of SA15: equalities. Focussing leisure and retail development in a single area may limit the accessibility of this to certain, less mobile groups. Other locations with potential for retail and leisure development, such as town centres, may be more accessible in terms of public transport. Overall, minor negative uncertain effects are recorded for Option A and minor positive uncertain effects are recorded for Option B with regards to both SA15: equalities and SA16: access to services & facilities.

Table 7.1: SA scores for location of future comparison shopping options

	1: Air quality	2: Biodiversity, flora & fauna	3: Climate change & energy	4: Historic environment	5: Flood risk	6: Geology & soils	7: landscape, townscape & visual	8: Materials & waste	9: Noise	10: Water resources & quality	11: Economy & employment	12: Education & skills	13: Housing	14: Crime & safety	15: Equalities	16: Health & wellbeing	17: Access to services & facilities
A: Lakeside focus	-	-	-	0	-?	0	0?	+	-	-?	++ /-	0	0	0	-?	0	-?
B: Focus elsewhere	0?	-?	+	-?	0?	0	0?	+	-?	0?	+	0	0	0	+	0	+

Future planning status of Lakeside

7.14 Questions 26 and 27 of the Issues and Options (Stage 2) document considers the potential role of Lakeside as a town centre. Two options for the Local Plan have been identified:

- Option A: Define Lakeside as a Town Centre (so that it is subject to Town Centre policies within the NPPF and subsequent Local Plan ones) AND set conditions that limit future retail development in favour of achieving or maintaining the full mix of wider town centre uses.
- Option B: Do nothing and allow Lakeside to continue to expand as (or revert to) an out-of-centre retail and leisure park.

Assessment results

7.15 Under Option A, Lakeside would likely include a wider range of services and facilities, which is likely to attract a higher number of people. As such, this could lead to increased traffic in nearby AQMAs, including along the A1306, resulting in minor negative uncertain effects for SA1: air quality.

7.16 Whilst Option A would increase traffic locally, it could reduce the need to travel and/or distance travelled in the Borough overall. This is because people will be able to meet more of their needs at Lakeside and therefore will not need to take separate trips to town centres and the retail facilities at Lakeside. In addition, this could lead to a greater range of town centre uses being available closer to those living or working nearer Lakeside than other town centres and Lakeside is served by existing public transport services, particularly with regards to high frequency links to Grays and South Ockendon. Overall, Option A is expected to have minor positive uncertain effects on SA3: climate change & energy. Similarly, minor positive effects are expected with regards to SA17: access to services & facilities.

7.17 Option A is assessed as having mixed minor positive, minor negative and uncertain effects on SA11: economy & employment. In diversifying the services and facilities at Lakeside, this option could increase footfall and investment in the area. However, retaining the area as an out of town retail and leisure centre could attract larger investments that would be foregone under Option A. In addition, it is unknown what effect this would have on other town centres in Thurrock and local businesses.

7.18 Option B reflects the baseline situation without the plan, therefore all effects are expected to be negligible.

Table 7.2: SA scores for future planning status of Lakeside options

	1: Air quality	2: Biodiversity, flora & fauna	3: Climate change & energy	4: Historic environment	5: Flood risk	6: Geology & soils	7: landscape, townscape & visual	8: Materials & waste	9: Noise	10: Water resources & quality	11: Economy & employment	12: Education & skills	13: Housing	14: Crime & safety	15: Equalities	16: Health & wellbeing	17: Access to services & facilities
A: Lakeside as town centre	-?	0	+	0	0	0	0	0	0	0	+/-?	0	0	0	0	0	+
B: Lakeside as retail and leisure park	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Conclusions and recommendations

- 7.19 Focusing development at Lakeside and designating it as a town centre is likely to increase traffic in the area, leading to negative environmental effects, but could increase investment and footfall, therefore having positive economic impacts. Focusing development solely at Lakeside could have negative effects on existing town centres and limit access to services and facilities by focusing these in one area. Alternatively, diversifying Lakeside into a town centre could increase accessibility of services and facilities for those living or working nearby.
- 7.20 Future development of retail and leisure uses at Lakeside should be balanced with the need to maintain and improve existing town centres.

Town Centres

Grays town centre allocations

- 7.21 Question 28a) of the Issues and Options (Stage 2) document sets out the following options for the future of additional comparison of convenience shopping floorspace in Grays Town Centre:
 - Option A: Specific allocation of additional sites for development.
 - Option B: Focus on strengthening and consolidating retail activity around Grays Shopping Centre and adjoining areas.

Assessment results

- 7.22 Option A may bring more opportunities for redevelopment of sites that are disused or run-down, which could have positive effects for SA7: landscape, townscape and visual. Allocating specific sites for comparison or convenience floorspace may encourage development of these sites, leading to minor positive effects for SA11: economy & employment. However, these are mixed with minor negative effects, as if the demand for such sites is not there, this may prevent these sites being used for other employment uses. The outcome of this policy option would also depend on whether a policy of limiting future retail growth at Lakeside is pursued (as explored under Question 26) as this would be likely to influence retailer demand for comparison shopping sites in Grays. This further increases uncertainty as to whether Option A under Question 28 would result in positive or negative effects.

- 7.23 Option B is expected to largely reflect the baseline situation. However, consolidating retail activity around the Grays Shopping Centre could make shopping easier for the less mobile, as shops may be in closer proximity to each other, therefore having minor positive effects on SA15: equalities.
- 7.24 Effects against all other objectives are likely to be negligible.

Table 7.3: SA scores for Grays town centre allocations options

	1: Air quality	2: Biodiversity, flora & fauna	3: Climate change & energy	4: Historic environment	5: Flood risk	6: Geology & soils	7: landscape, townscape & visual	8: Materials & waste	9: Noise	10: Water resources & quality	11: Economy & employment	12: Education & skills	13: Housing	14: Crime & safety	15: Equalities	16: Health & wellbeing	17: Access to services & facilities
A: Allocations	0	0	0	0	0	0	+	0	0	0	+/-	0	0	0	0	0	0
B: Strengthen and consolidate around Grays Shopping Centre	0	0	0	0	0	0	0	0	0	0	0	0	0	0	+	0	0

Flexibility in Grays town centre

- 7.25 Question 28b) of the Issues and Options (Stage 2) document asks whether the Council should provide more flexibility to accommodate non-retail uses in Grays Primary and Secondary shopping frontages. This implies there are two options for the Local Plan:
- Option A: Amend the current approach to managing the mix of permitted uses in Grays Primary and Secondary shopping frontages to provide more flexibility to accommodate non-retail uses.
 - Option B: Do not amend the current approach.

Assessment results

- 7.26 Option A could lead to a shift from primarily retail to other uses. This could result in residents having to travel further, particularly to access comparison shopping, which could result in increased car movements and associated increases in air pollution and greenhouse gas emissions. As such, minor negative uncertain effects are recorded with regards to SA1: air quality and SA2: climate change & energy.
- 7.27 Alternatively, Option A may help to revitalise town centres by encouraging use of vacant sites and increasing the amount of people in the town centre, such as through development of offices or restaurant, leisure and recreation uses. This could lead to job creation and a boost for the local economy, leading to a minor positive effect on SA11: economy & employment, although this is uncertain as it depends on the extent and nature of new businesses moving in.
- 7.28 As explained above, Option A could reduce accessibility to retail opportunities, leading to minor negative effects for SA15: equalities. However, allowing a greater range of uses in the town

centre could improve the accessibility of other services, facilities and employment opportunities for those with protected characteristics, therefore the minor negative effects are mixed with minor positive effects. Similarly, mixed minor positive and minor negative effects are likely with regards to SA17: access to services & facilities.

- 7.29 Option B is expected to have largely negligible effects as it reflects the baseline situation. However, in the longer term Option B could lead to minor negative effects on SA11: economy & employment, when compared to the future baseline without the plan, as it may hinder regeneration of the town centre by safeguarding sites for a use (retail) that is not in demand and therefore development may be unlikely to come forward.

Table 7.4: SA scores for flexibility in Grays town centre options

	1: Air quality	2: Biodiversity, flora & fauna	3: Climate change & energy	4: Historic environment	5: Flood risk	6: Geology & soils	7: landscape, townscape & visual	8: Materials & waste	9: Noise	10: Water resources & quality	11: Economy & employment	12: Education & skills	13: Housing	14: Crime & safety	15: Equalities	16: Health & wellbeing	17: Access to services & facilities
A: More flexibility for non-retail	-?	0	-?	0	0	0	0	0	0	0	+	0	0	0	+/-	0	+/-
B: Current approach	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0

Hierarchy of centres

- 7.30 Question 29 of the Issues and Options (Stage 2) document asks whether the retail hierarchy should be revised. This implies two options for the Local Plan:
- Option A: Revise the retail hierarchy for town centres and other shopping locations within Thurrock to take into account both historical and future changes in their role including the need to plan for future housing growth.
 - Option B: Do not revise the retail hierarchy.

Assessment results

- 7.31 Option A is likely to allow for more appropriate planning of development of retail centres that responds to future changes in the retail environment and the distribution of the Borough's population. This may help to ensure that such centres are successful and play a valuable role in Thurrock's economy, resulting in minor positive effects for SA11: economy & employment.
- 7.32 Option A is also expected to ensure that new and existing town centres develop in an appropriate way, therefore meeting the needs of new and existing residents. This could therefore result in minor positive effects for SA15: equalities, SA16: health and wellbeing and SA17: access to services and facilities.
- 7.33 Option B reflects the likely future baseline without the plan (against which effects are assessed), therefore negligible effects are recorded against all objectives. However, it should be noted that without the plan there is likely to be an increasingly unsuitable retail offer, as the current retail

hierarchy may not reflect the changing roles of town centres and changing patterns of population and settlement growth.

7.34 All scores have been recorded as uncertain, as effects depend on the policies coming forwards to guide development according to the retail hierarchy.

Table 7.5: SA scores for hierarchy of centres options

	1: Air quality	2: Biodiversity, flora & fauna	3: Climate change & energy	4: Historic environment	5: Flood risk	6: Geology & soils	7: landscape, townscape & visual	8: Materials & waste	9: Noise	10: Water resources & quality	11: Economy & employment	12: Education & skills	13: Housing	14: Crime & safety	15: Equalities	16: Health & wellbeing	17: Access to services & facilities
A: Revise retail hierarchy	0	0	0	0	0	0	0	0	0	0	+	0	0	0	+	+	+
B: Do not revise hierarchy	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Town centre development

7.35 Question 30 asks whether retail allocations and town centre boundaries should be amended. This implies two options for the Local Plan:

- Option A: Amend retail allocations and town centre boundaries identified in the adopted Core Strategy to include areas/sites that would enable the centres to grow and accommodate retail or other town centre uses, including housing, or exclude areas that are no longer appropriate.
- Option B: Retain retail allocations and town centre boundaries in the adopted Core Strategy.

Assessment results

7.36 Option A would enable town centres to grow to meet increasing demand, which could provide more employment opportunities, as well as encouraging investment and increasing footfall in town centres, therefore significant positive effects are expected with regards to SA11: economy and employment. While excluding areas that are no longer appropriate may be practical in terms of policy making, this could reduce flexibility for future changes in demand for town centre uses, therefore the significant positive effect identified is uncertain.

7.37 Option A is also expected to ensure that new and existing town centres develop in an appropriate way, therefore meeting the needs of new and existing residents. This could therefore result in minor positive effects for SA15: equalities, SA16: health and wellbeing and SA17: access to services and facilities. Option B reflects the likely future baseline without the plan (against which effects are assessed) therefore negligible effects are recorded against all objectives. However, it should be noted that in the absence of the plan, existing town centre boundaries may become increasingly inappropriate as the use of town centres and the land around them changes.

7.38 All scores (except negligible scores) have been recorded as uncertain, as effects depend on future fluctuations in demand and the policies coming forwards to guide development in town centres.

Table 7.6: SA scores for the town centre development options

	1: Air quality	2: Biodiversity, flora & fauna	3: Climate change & energy	4: Historic environment	5: Flood risk	6: Geology & soils	7: landscape, townscape & visual	8: Materials & waste	9: Noise	10: Water resources & quality	11: Economy & employment	12: Education & skills	13: Housing	14: Crime & safety	15: Equalities	16: Health & wellbeing	17: Access to services & facilities
A: Amend boundaries	0	0	0	0	0	0	0	0	0	0	+	0	0	0	+	+	+
B: Retain boundaries	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Conclusions and recommendations

- 7.39 The Town centres policy options are generally likely to have negligible or minor positive effects. A number of the options would not change the future baseline without the plan. However, it is anticipated that policies allowing for more flexibility in town centres is likely to be positive in terms of sustainability, as the role of town centres is likely to change due to changing behaviours, such as the role of online shopping, and the changing settlement pattern in the Borough due to population growth and new development.

Hot Food Takeaways and Betting Shops

Restricting hot food takeaways

- 7.40 Question 33 asks if there should be restrictions on hot food takeaways and betting shops and implies the following options:
- Option A: Restrict the number and distribution of hot food takeaways and betting shops in town/shopping centres to avoid over-concentration and clustering.
 - Option B: Restrict hot food takeaways near to schools, youth facilities and parks.
 - Option C: Do not restrict hot food takeaways or betting shops.

Assessment results

- 7.41 Option A is expected to minimise the negative effects associated with hot food takeaways and betting shops in the town centre. Hot food takeaways are associated with traffic and parking problems, which is exacerbated where there is a cluster of these. As such, restricting hot food takeaways in town/shopping centres is expected to minimise associated traffic and congestion issues, resulting in minor positive effects on SA1: air quality and SA3: climate change & energy.
- 7.42 Clusters of hot food takeaways and betting shops can also have negative effects on visual amenity and the surrounding townscape. They could also negatively affect the settings of historic environment assets, although this depends on the location of hot food takeaways in relation to these assets and their design. As such, Option A could have minor positive uncertain effects on SA4: historic environment and minor positive effects on SA7: landscape, townscape & visual.
- 7.43 Clusters of hot food takeaways can lead to congregations of customers, particularly in the late evenings, which can lead to increased noise and anti-social behaviour. Such gatherings can make

passers-by feel less safe, therefore increasing the fear of crime. Betting shops have also been associated with low-level crime and anti-social behaviour. Option A could reduce these issues, leading to positive effects with regards to SA 9: noise and SA15: crime & safety.

- 7.44 Both Options A and B could have minor negative effects on SA11: economy and employment if restrictions of hot food takeaways result in closure of existing businesses. This could lead to a loss of employment opportunities and local businesses, albeit at a very small scale. These effects are uncertain as it may be possible for such businesses to relocate elsewhere. Even if businesses relocate elsewhere, they may experience reduced custom, which could decrease their profitability. Hot food takeaways can reduce the active frontage on high streets during the day, as they are often only open in the evening. As such, in avoiding over-concentration and clustering of hot food takeaways, Option A may help to maintain the vitality of town centres.
- 7.45 Both Options A and B are expected to have significant positive effects with regards to SA16: health and wellbeing, as restricting access to hot food takeaways, particularly for young people, reduces the temptation for residents to purchase unhealthy food options. Restricting access to betting shops may also help to minimise wellbeing issues associated with gambling and related financial difficulties.
- 7.46 Option C is assessed as having negligible effects against all SA objectives as it does not differ from the baseline situation.

Table 7.7: SA scores for options for restricting hot food takeaways

	1: Air quality	2: Biodiversity, flora & fauna	3: Climate change & energy	4: Historic environment	5: Flood risk	6: Geology & soils	7: landscape, townscape & visual	8: Materials & waste	9: Noise	10: Water resources & quality	11: Economy & employment	12: Education & skills	13: Housing	14: Crime & safety	15: Equalities	16: Health & wellbeing	17: Access to services & facilities	
A: Avoid over-concentration and clustering in centres	+	0	+	+?	0	0	+	0	+	0	-?	0	0	+	0	+	+	0
B: Restrict near schools, youth facilities & parks	0	0	0	0	0	0	0	0	0	0	-?	0	0	0	0	+	+	0
C: Do not restrict	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Conclusions and recommendations

- 7.47 Limiting hot food takeaways and betting shops in town/shopping centres is likely to have positive impacts for health by reducing impulse visits to these. In particular, restricting hot food takeaways near youth facilities and parks could help younger people to make healthier choices. Limiting over-concentration of hot food takeaways in towns can also have positive environmental effects by reducing traffic congestion and improving the townscape. However, both Options A and B could have negative economic impacts. The Council could consider limiting hot food takeaways

and betting shops in town centres as well as restricting hot food takeaways near schools, youth facilities and parks, i.e. pursue both options A and B.

8 Sustainability Appraisal Findings for Health & Well-being Options

- 8.1 This section of the Issues and Options (Stage 2) document considers how development could promote better health and wellbeing and protect local character.

Designing Active Places

Active Design Principles

- 8.2 Question 37 of the Issues and Options (Stage 2) document asks whether Sport England's Active Design Principles should be embedded in the Local Plan. This implies two options for the Local Plan:
- Option A: Embed Sport England's Active Design Principles in the emerging Local Plan.
 - Option B: Do not embed Sport England's Active Design Principles in the emerging Local Plan.

Assessment results

- 8.3 Sport England's Active Design Principles ('the Principles') promote walkable communities, co-locating community facilities and connected walking and cycling routes in order to reduce the need to travel by car and encourage travel by active transport, therefore reducing use of vehicular transport and associated emissions of air pollutants and greenhouse gases. As such, Option A is expected to have minor positive effects on SA1: air quality and significant positive effects for SA3: climate change & energy. This is also expected to lead to significant positive effects on SA17: access to services & facilities.
- 8.4 The Principles promote green infrastructure, including a network of multi-functional open space, which could contribute to improving biodiversity in urban areas, resulting in minor positive uncertain effects for SA2: biodiversity, flora & fauna for Option A.
- 8.5 Option A is also likely to promote an attractive public realm, particularly as a result of the 'high quality streets and spaces' principle. This could help to protect and enhance the settings of heritage assets, resulting in minor positive effects on SA4: historic environment, although this is uncertain as it depends on the location and nature of any public realm improvements. In addition, improvements to the public realm are likely to lead to more attractive development and townscape enhancement, resulting in minor positive effects on SA7: landscape, townscape & visual.
- 8.6 Option A is likely to result in better sustainable transport connections, which may make it easier for people to access employment opportunities. In addition, the Principles promote green infrastructure and attractive public spaces, which can help improve the image of an area and increase inward investment. Given that Option A is expected to boost the health of Thurrock residents (see below), this may also mean that fewer working days are lost to ill health. Overall, these factors are expected to have a minor positive effect on SA11: economy and employment.
- 8.7 Option A is likely to enhance access accessibility of educational facilities and may also provide opportunities for less formal education opportunities, including outdoor learning. As such, minor positive effects are expected for SA12: education & skills.
- 8.8 The Principles promote high quality streets and spaces, which includes creating spaces where people feel safe travelling by foot and cycle. This is expected to contribute to reducing crime and the fear of crime, resulting in minor positive effects for SA14: crime & safety for Option A.

- 8.9 One of the principles is 'activity for all', which includes ensuring that physical activity is accessible to all, including those with protected characteristics. As such, Option A is assessed as having significant positive effects for SA15: equalities.
- 8.10 Option A would promote physical activity and associated healthier lifestyles, resulting in significant positive effects for SA16: health & wellbeing.
- 8.11 Option B is assessed as having negligible effects against all SA objectives as it does not differ from the baseline situation.

Table 8.1: SA scores for Active Design Principles options

	1: Air quality	2: Biodiversity, flora & fauna	3: Climate change & energy	4: Historic environment	5: Flood risk	6: Geology & soils	7: Landscape, townscape & visual	8: Materials & waste	9: Noise	10: Water resources & quality	11: Economy & employment	12: Education & skills	13: Housing	14: Crime & safety	15: Equalities	16: Health & wellbeing	17: Access to services & facilities
A: Embed Active Design Principles	+	+	+	+	0	0	+	0	0	0	+	+	0	+	+	+	+
B: Do not embed Active Design Principles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Conclusions and recommendations

- 8.12 Embedding active design principles is expected to have a range of positive effects against social, environmental and economic objectives. As such, embedding these principles or similar is likely to be the best performing option in terms of sustainability.

Assessing Health Impacts

Ensuring that the health impacts of new developments are appropriately assessed

- 8.13 Question 38 of the Issues and Options (Stage 2) document asks whether the Council should require Health Impact Assessment (HIA) to be submitted as part of large and/or sensitive planning applications. This implies two options for the Local Plan:
- Option A: Seek to require an HIA to be submitted as part of large and/or sensitive planning applications.
 - Option B: Do not require an HIA to be submitted as part of large and/or sensitive planning applications.

Assessment results

- 8.14 Option A would help to ensure that the effects of major and/or sensitive applications on health and wellbeing are appropriately considered, resulting in minor positive effects for SA16: health & wellbeing.

- 8.15 In addition, Health Impact Assessment may help to identify differential health impacts on different groups of people. This may help to guide design of such proposals in a way that minimises health inequalities, therefore having minor positive effects for SA15: equalities.
- 8.16 Option B is assessed as having negligible effects against all SA objectives as it does not differ from the baseline situation.

Table 8.2: SA scores for options for assessing health impacts

	1: Air quality	2: Biodiversity, flora & fauna	3: Climate change & energy	4: Historic environment	5: Flood risk	6: Geology & soils	7: landscape, townscape & visual	8: Materials & waste	9: Noise	10: Water resources & quality	11: Economy & employment	12: Education & skills	13: Housing	14: Crime & safety	15: Equalities	16: Health & wellbeing	17: Access to services & facilities
A: Require HIA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	+	+	0
B: Do not require HIA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Conclusions and recommendations

- 8.17 Requiring HIA is expected to encourage health impacts to be considered further in the planning process. However, it does not necessarily result in actions leading to better health outcomes. If HIA is required, the plan policies could state that significant negative health impacts are avoided and health benefits are maximised.

9 Conclusions

- 9.1 The Thurrock Issues and Options (Stage 2) Local Plan, and in particular the reasonable alternatives considered during its preparation have been subject to a detailed appraisal against the SA objectives which were developed at the scoping stage of the SA process.
- 9.2 The vision and objectives are generally expected to have positive sustainability implications, particularly as many of the draft objectives for the Local Plan directly address one or more SA objectives.
- 9.3 The housing growth options are expected to have a mix of both positive and negative sustainability effects. The assessments for the overall housing quanta options, the housing growth options and the Major Urban Extension options showed the strongest sustainability effects. There are some effects common to all spatial housing growth options, such as the likelihood that development will increase traffic and congestion, but will provide new homes and services. In order to deliver the housing that Thurrock needs over the plan period within the Borough, the Local Plan is likely to require development of a substantial amount of greenfield land across the Borough. This is likely to have negative implications for many of the environmental SA objectives, although it is likely that these could be minimised and mitigated through development management policies and site-specific allocation policies, for example by requiring good design, incorporating and enhancing blue and green infrastructure, and supporting developments that achieve net environmental gain. In addition, large-scale, new development presents opportunities for economic growth and provision of new services and facilities for residents. Similarly, better health outcomes could be designed into new development through including health and wellbeing policies in the Local Plan, the review of the Design Strategy and through implementation of the emerging Green and Blue Infrastructure Strategy.
- 9.4 There is also a mix of positive and negative effects expected with regards to employment options, although these are generally minor effects, with significant effects only being recorded against SA objectives 5 (flood risk), 7 (landscape, townscape & visual) and 11 (economy & employment).
- 9.5 The retail and leisure options look at where retail and leisure facilities should be located in the future, with particular consideration as to how Lakeside and Grays town centre should develop. Many options considered whether a new approach to planning policy should be introduced. Generally, introducing the new approaches suggested in the Issues and Options (Stage 2) document is expected to perform better in sustainability terms than a 'business as usual' approach.
- 9.6 The Development Principles section of the Issues and Options (Stage 2) document focuses on seeking opinions on what aspects of Thurrock are important to respondents. Where options could be identified, inclusion of active design principles and requiring Health Impact Assessment were expected to have more positive effects than a 'business as usual' approach.
- 9.7 The implementation of the Lower Thames Crossing (LTC) would significantly alter the baseline against which the Local plan policies will be appraised. There remains uncertainty at this stage about the alignment and design of the LTC. While the LTC is likely to have some positive sustainability effects, a number of existing sustainability issues, notably health and well-being, are likely to be exacerbated.

Next Steps

- 9.8 This SA Report will be available for consultation from January 2019.
- 9.9 Following this consultation, the responses will be reviewed and addressed as appropriate. The findings of the SA and the outcomes of the consultation will be taken into account by the Council

as it prepares the next iteration of the Local Plan. The next stage of the Local Plan will involve identifying a preferred approach from the options identified at this stage of assessment and refining these; this may involve combining discrete options presented at the current stage. The SA will then be updated to reflect the preferred options version of the Local Plan and further consideration will be given to cumulative effects, potential mitigation measures, and the approach to monitoring the likely significant effects of the plan.

LUC
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