

Integrated Impact Assessment (IIA) for the Southend-on-Sea Local Plan

Interim IIA Report

Southend-on-Sea Borough Council

August 2021

Quality information

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1. Introduction

Background

- 1.1 AECOM has been commissioned to undertake an independent Integrated Impact Assessment (IIA) in support of Southend-on-Sea Borough Council's emerging new Local Plan (hereafter referred to as the 'Local Plan'). IIA fulfils the requirements and duties for Sustainability Appraisal (SA) and Strategic Environmental Assessment (SEA), Equalities Impact Assessment (EqIA) and Health Impact Assessment (HIA).

IIA explained

- 1.2 IIA is a mechanism for considering and communicating the impacts of an emerging plan, and potential alternatives in terms of key sustainability issues. The aim of IIA is to inform and influence the plan-making process with a view to avoiding and mitigating negative impacts and maximising positive impacts. Through this approach, the IIA for the Local Plan seeks to maximise the developing plan's contribution to sustainable development.
- 1.3 As identified above, the IIA seeks to fulfil the requirements and duties for SA, SEA, EqIA and HIA. The approach is to fully integrate these components to provide a single assessment process to inform the development of the new Local Plan. A description of each of the various components and their purposes is provided below.

Sustainability Appraisal (SA)

- 1.4 SA is undertaken to address the procedures prescribed by the Environmental Assessment of Plans and Programmes Regulations 2004 (the SEA Regulations). SA is a legal requirement for Local Plans¹.
- 1.5 The National Planning Practice Guidance (NPPG) states that *"the role of the Sustainability Appraisal is to promote sustainable development by assessing the extent to which the emerging plan, when judged against reasonable alternatives, will help to achieve relevant environmental, economic and social objectives."*²
- 1.6 In line with the requirements of the SEA Regulations, the two key steps in SA are that:
1. When deciding on 'the scope and level of detail of the information' which must be included in the SA Report there is a consultation with nationally designated authorities concerned with environmental issues; and
 2. A report (the 'SA Report') is published for consultation alongside the Draft Plan that presents an assessment of the Draft Plan (i.e. discusses 'likely significant effects' that would result from plan implementation) and reasonable alternatives.
- 1.7 This Interim IIA Report is concerned with the reasonable alternatives that have been identified and considered at this Regulation 18 stage in the plan making process. The assessment of these alternatives will help inform the local planning authority's choice of preferred approach. This stage should also involve considering ways of mitigating any adverse effects, maximising beneficial effects and identifying ways of monitoring likely significant effects.
- 1.8 The NPPG states that, *"The development and appraisal of proposals in Local Plan documents should be an iterative process, with the proposals being revised to take account of the appraisal findings. This should inform the selection, refinement and publication of proposals"*.

¹ Section 19 of the Planning and Compulsory Purchase Act 2004

² Ministry of Housing, Communities & Local Government (2015) Planning Practice Guidance Strategic environmental assessment and sustainability appraisal Para 001 Reference ID: 11-001-20140306 [online] available at: <https://www.gov.uk/guidance/strategic-environmental-assessment-and-sustainability-appraisal> Accessed Dec 2018

- 1.9 It also states more widely that the SA “*should identify, describe and evaluate the likely significant effects on environmental, economic and social factors using the evidence base*”.³ Criteria for determining the likely significance of effects on the environment are set out in schedule 1 to the SEA Regulations.

Equalities Impact Assessment (EqIA)

- 1.10 As a public-sector organisation, Southend-on-Sea Borough Council has a duty under the Equality Act 2010⁴ and associated Public Sector Equality Duty (PSED) to ensure that the objectives and policy options within the Local Plan avoid unlawful discrimination (direct and indirect), as well as advancing equality of opportunity and fostering good relations between those with protected characteristics⁵ and all others. An Equality Impact Assessment (EqIA) is often used by public sector organisations to demonstrate how this duty has been met.

Health Impact Assessment (HIA)

- 1.11 There are numerous links to planning and health highlighted throughout the National Planning Policy Framework (NPPF) (2019). The NPPG states that Local Planning Authorities (LPAs) should ensure that health and wellbeing, and health infrastructure are considered in Local Plans and in planning decision-making.⁶ A Health Impact Assessment (HIA) is a tool used to identify and assess the potential impacts of a plan and to inform decision-making. Public Health England published a guide for HIA in spatial planning in October 2020⁷, this includes suggestions on how it can be integrated with the SA/ SEA process.

This Interim IIA Report

- 1.12 This Interim IIA Report is published alongside the Refining the Plan Options Document, under Regulation 18 of the Local Planning Regulations. The legally required IIA Report will be published subsequently, alongside the final draft (‘Pre-Submission’) version of the Local Plan, under Regulation 19 of the Local Planning Regulations.

Southend-on-Sea Borough’s new Local Plan

- 1.13 The Council is in the process of producing a new Local Plan in line with policy and guidance changes at the national and local level, which includes the publication of the National Planning Policy Framework (NPPF) and National Planning Practice Guidance (NPPG). The new Local Plan will include strategic and detailed planning and development management policies, land allocations for housing, employment and mixed use and will identify areas in the borough for protection. The area covered by the Local Plan can be seen in **Figure 1**.
- 1.14 The new Local Plan is being prepared in the context of the emerging South Essex Joint Strategic Framework, which seeks to deliver upon the ‘South Essex 2050 Ambition’ (SE2050). This is a long-term growth ambition being developed by the South Essex Local Authorities that underpins the strategic spatial, infrastructure and economic priorities across the sub-region.
- 1.15 In January 2018, Basildon Borough Council, Brentwood Borough Council, Castle Point Borough Council, Rochford District Council, Southend-on-Sea Borough Council, Thurrock Borough Council and Essex County Council formed the Association of South Essex Local Authorities

³ Ministry of Housing, Communities & Local Government (2015) Planning Practice Guidance Strategic environmental assessment and sustainability appraisal Para 014 Reference ID: 11-001-20140306 [online] available at: http://planningguidance.communities.gov.uk/blog/guidance/strategic-environmental-assessment-and-sustainability-appraisal/sustainability-appraisal-requirements-for-local-plans/#paragraph_013

⁴ Equality Act 2010 [online] available at: <http://www.legislation.gov.uk/ukpga/2010/15/contents>

⁵ Protected characteristics under the Equality Act 2010 include age, sex, marital status, disability, gender reassignment, ethnicity, religion, pregnancy and maternity, sexual orientation and deprived/disadvantaged groups.

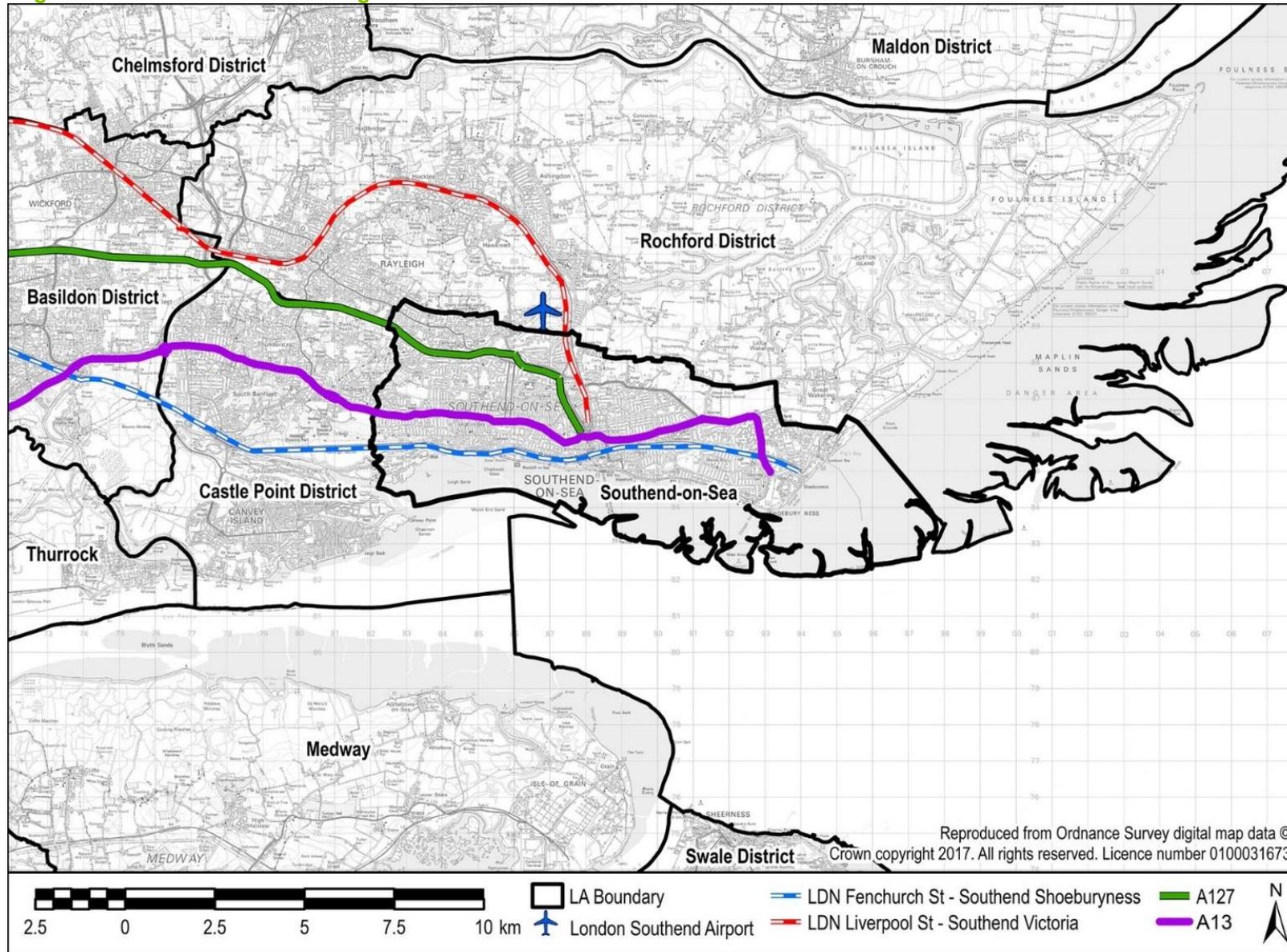
⁶ Ministry of Housing, Communities & Local Government (2015) Planning Practice Guidance. Paragraph: 001 Reference ID: 53-001-20140306 [online] available at: <https://www.gov.uk/guidance/health-and-wellbeing>

⁷ Public Health England (2020) Health Impact Assessment in spatial planning [online] available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/929230/HIA_in_Planning_Guide_Sept2020.pdf

(ASELA) to ensure that implementation of the SE2050 Ambition has strong leadership and is managed on a truly collaborative basis.

- 1.16 The spatial strategy to implement the SE2050 Ambition is being implemented through a new planning 'portfolio'. The non-statutory South Essex Joint Strategic Framework (or South Essex Plan-SEP) currently being prepared will provide overarching non-statutory planning guidance for the South Essex sub-region. The constituent statutory Local Plans and other place-shaping tools will be used to deliver this on the ground, using the range of planning tools available in a more flexible and responsive way.

Figure 1: Southend-on-Sea Borough



Refining the Plan Options Document

1.17 The Refining the Plan Options Document represents the Council's second public stage of plan preparation in accordance with the Town and Country Planning Regulations (2012). In line with Regulation 18, the Council is undertaking this consultation to inform future stages in the preparation of the Local Plan. The Refining the Plan Options Document is structured and seeks views on the following:

- **Part 1** - Aim and objectives
- **Part 2** - Spatial Strategy
- **Part 3** - Southend Neighbourhoods

What is the scope of the IIA?

Scoping

1.18 The aim here is to introduce the reader to the scope of the IIA, i.e. the integrated sustainability, equalities and health objectives that should be a focus of (and provide a broad methodological framework for) IIA. Further information on the scope of the IIA - i.e. a more detailed review of issues/objectives as highlighted through a review of the 'context' and 'baseline' - is presented in the IIA Scoping Report (2017).

1.19 The Regulations require that "*When deciding on the scope and level of detail of the information that must be included in the Environmental Report [i.e. the IIA scope], the responsible authority shall consult the consultation bodies*". In England, the consultation bodies are the Environment Agency, Historic England and Natural England. A Scoping Report was sent to the statutory consultees for comment and published on the Council's website in October 2017.⁸ The responses received have been taken into account and amendments made to the baseline information and IIA Objectives where necessary.

IIA Objectives

1.20 **Table 1.1** presents the IIA Objectives - grouped under ten topic headings - established through IIA scoping, i.e. in light of context/ baseline review, identified key issues and responses from statutory consultees.

1.21 Taken together, the IIA topics and draft objectives presented in **Table 1.1** provide a methodological 'framework' for appraisal.

Table 1.1: IIA Objectives

IIA Objectives	Assessment questions
Biodiversity	
Protect and enhance biodiversity within and surrounding the borough.	Will the option/proposal help to:
<i>Relevant SEA Topics:</i> <i>Biodiversity, flora & fauna</i>	<ul style="list-style-type: none"> • Minimise impacts on biodiversity and provide net gains where possible? • Protect and enhance ecological networks, including those that cross administrative boundaries?
<i>Relevant NPPF Paragraphs: 109 & 117</i>	<ul style="list-style-type: none"> • Minimise recreational impacts on designated sites, in particular European sites?

⁸ AECOM (2017) Southend-on-Sea Local Plan Integrated Impact Assessment Scoping Report [online] available at: <https://www.southend.gov.uk/info/200128/planning_and_building/807/southend_new_local_plan/2> Accessed Dec 2018

IIA Objectives

Assessment questions

Climate Change

Promote climate change mitigation in Southend-on-Sea Borough.

Relevant SEA Topics:

Climatic factors

Relevant NPPF Paragraphs:
93-108

Will the option/proposal help to:

- Promote the use of sustainable modes of transport, including walking, cycling and public transport?
- Reduce the need to travel?
- Promote use of energy from low carbon sources?
- Reduce energy consumption and increase efficiency?

Support the resilience of Southend-on-Sea Borough to the potential effects of climate change.

Relevant SEA Topics:

Climatic factors & water

Relevant NPPF Paragraphs:
93-108

Will the option/proposal help to:

- Direct development away from areas at risk of all forms of flooding as per the sequential test, taking into account the likely effects of climate change?
- Make development safe where it is necessary within an area of flood risk and without increasing flood risk elsewhere?
- Sustainably manage water run-off, with priority given to SuDS, ensuring that the risk of flooding is not increased and where possible reduced?
- Improve and enhance multifunctional green infrastructure networks in the borough (and beyond) to support adaptation to the potential effects of climate change?
- Support the priorities identified in the Essex and South Suffolk Shoreline Management Plan?

Landscape and Historic Environment

Protect and enhance the significance of the borough's historic environment, heritage assets and their settings.

Relevant SEA Topics:

Cultural heritage including architectural and archaeological heritage

Relevant NPPF Paragraphs:
6-10 & 126-141

Will the option/proposal help to:

- Protect, and where possible, enhance heritage assets and their settings?
- Protect, and where possible, enhance conservation areas?
- Protect, and where possible, enhance the wider historic environment?
- Support access to, interpretation and understanding of the historic environment?

Protect and enhance the character and quality of the borough's landscapes and townscapes.

Relevant SEA Topics:

Landscape

Relevant NPPF Paragraphs:
109-125

Will the option/proposal help to:

- Protect and enhance landscape and townscape character?
- Support the integrity of the borough's conservation areas?

Environmental Quality

Improve air, soil and water quality.

Relevant SEA Topics:

Soil, water and air

Relevant NPPF Paragraphs:
109-125

Will the option/proposal help to:

- Maintain or improve local air quality?
- Promote the remediation of contaminated land?
- Protect and improve the area's chemical & biological water quality?
- Protect groundwater resources?

IIA Objectives

Assessment questions

Land, Soil and Water Resources

Promote the efficient and sustainable use of natural resources.

Relevant SEA Topics:

Water and soil

Relevant NPPF Paragraphs:

47-78

Will the option/proposal:

- Promote the use of previously developed land?
- Avoid the use of land classified as best and most versatile agricultural land?
- Minimise water consumption?
- Reduce the amount of waste produced and move it up the waste hierarchy?
- Encourage recycling of materials and minimise consumption of resources during construction?

Population and Communities

Cater for existing and future residents' needs as well as the needs of different groups in the community.

Relevant SEA Topics:

Population and human health

Relevant NPPF Paragraphs:

47-78

Will the option/proposal help to:

- Meet the identified objectively assessed housing needs for the borough?
- Ensure an appropriate mix of dwelling sizes, types and tenures to meet the needs of all sectors of the community?
- Provide housing in sustainable locations that allow easy access to a range of local services and facilities?
- Promote the development of a range of high quality, accessible community facilities, including specialist services for disabled and older people?

To maintain and enhance community and settlement identity.

Relevant SEA Topics:

Population and human health

Relevant NPPF Paragraphs:

47-78

Will the option/proposal help to:

- Avoid the coalescence of settlements and loss of Green Belt land?
- Provide development in the most deprived areas and stimulate regeneration?
- Can development effectively integrate within the existing settlement pattern?
- Enhance the identity of a community or settlement?

Health and Wellbeing

Improve the health and wellbeing of Southend-on-Sea Borough's residents.

Relevant SEA Topics:

Population and human health

Relevant NPPF Paragraphs:

69-78

Will the option/proposal help to:

- Promote accessibility to a range of leisure, health and community facilities for all age groups?
- Encourage healthy lifestyles and reduce health inequalities?
- Enhance multifunctional green infrastructure networks in the borough?
- Provide and enhance the provision of community access to green infrastructure?
- Improve access to the countryside for recreation?

Equalities, diversity and inclusion

Advance equality of opportunity and foster good relations between people in the borough.

Relevant SEA Topics:

Population & human health

Relevant NPPF Paragraphs:

69 - 78

Will the option/proposal help to:

- Meet the needs of all people in the borough?
- Encourage the integration and interaction of different people/ communities?
- Reduce inequalities?
- Remove or minimise disadvantages suffered by people due to their protected characteristics?
- Improve access to housing, employment, training, health and leisure opportunities?

IIA Objectives

Assessment questions

Transport and Movement

Promote sustainable transport use and reduce the need to travel.

*Relevant SEA Topics:
Population, human health and material assets*

*Relevant NPPF Paragraphs:
29-41*

Will the option/proposal help to:

- Reduce the need to travel through sustainable patterns of land use and development?
- Encourage modal shift to more sustainable forms of travel?
- Enable transport infrastructure improvements?
- Facilitate working from home and remote working?
- Provide improvements to and/ or reduce congestion on the existing highway network?

Economy

Support a strong, diverse and resilient economy that provides opportunities for all.

*Relevant SEA Topics:
Population and human health*

*Relevant NPPF Paragraphs:
18-22, 42 & 43*

Will the option/proposal help to:

- Facilitate the provision of the right type of employment land in the right place?
- Provide employment in the most deprived areas and stimulate regeneration?
- Support the economic vitality and viability of the borough's centres and shopping areas?
- Create opportunities for a variety of businesses and people to flourish in the borough?
- Support the visitor economy?
- Facilitate working from home, remote working and home-based businesses?
- Support the growth of London Southend Airport?
- Enhance educational opportunities?

Part 1: What has plan-making/
IIA involved up to this point?

2. Introduction (to Part 1)

2.1 The chapter sets out the work undertaken by the Council to date in the preparation of the Local Plan and the Refining the Plan Options Document.

Issues and Options (2019)

2.2 The Issues and Options Document sets out the main borough-wide challenges and alternative options for addressing spatial planning issues. Informed by the adopted and emerging policy documents and evidence base at the time, the Issues and Options Document was divided into five main sections. Within these sections twelve key issues were identified (**Table 2.1**) and a range of options presented under each issue.

Table 2.1 Southend-on-Sea Issues and Options Report key issues

Section 1 - A Vision for Change	
Issue 1	Our Vision & Strategy for the Future
Section 2 - Planning for Growth and Change	
Issue 2	Housing Including New Housing, Conversions, Affordable Housing, Self-Build
Issue 3	Securing a Thriving Local Economy
Issue 4	Promoting Southend as a Major Resort
Issue 5	Providing for Vibrant and Attractive Town Centres
Issue 6	Providing for a Sustainable Transport System
Section 3 - Creating Good Quality and Healthy Places	
Issue 7	Facilitating Good Design, Healthy Living and Built Heritage
Issue 8	Providing Community Services and Infrastructure
Issue 9	Enhancing our Natural Environment
Issue 10	Planning for Climate Change
Section 4 - Southend's Neighbourhoods	
Issue 11	Southend's Neighbourhoods
Section 5 - Deliverability & Implementation	
Issue 12	Ensuring that the New Local Plan is Delivered

2.3 Each key issue and the options presented under them were considered through the IIA process. The findings were presented in an Interim IIA Report (January 2019) that accompanied the Issues and Options Document on public consultation from 5 February to 2 April 2019. The representations received through this first consultation stage are presented in the Consultation Report (September 2019).⁹

Refining Plan Options

2.4 Since the publication of the Issues and Options Document in early 2019, there have been a number of new evidence base studies emerging in support of the South Essex Strategic Framework including¹⁰:

- South Essex Gypsy and Traveller Area Assessment (April 2019).
- South Essex Employment Grow-on Space Study (Feb 2020).
- South Essex Green and Blue Infrastructure Study (2020).
- South Essex Strategic Growth Locations Study (May 2020).

⁹ <https://localplan.southend.gov.uk/issues-and-options/issues-and-options-reports>

¹⁰ <https://www.southessexplan.co.uk/south-essex-plan/what-is-the-evidence-base>

- South Essex Tourism, Recreation and Leisure Strategy (2020).
- 2.5 The Borough Council has also prepared a Southend '2050 Ambition and Road Map' in partnership with the local community, which considers the future development of the Borough and how it affects the everyday lives of the people that live, work and visit here. The Borough Council also jointly commissioned, with Rochford District Council, a Landscape Character, Sensitivity and Capacity Study which was published in July 2019.
- 2.6 The updated context and evidence as well as consultation feedback on the Issues and Options Document have informed the development of the Refining Policy Options Document. It identifies four strategy options as follows:
- A. Increasing Urban Capacity:** sites that broadly accord to existing plan policies located on previously developed land.
 - B. Facilitating Urban Change:** sites that would likely require a change to existing plan policies to come forward or would include the redevelopment of some existing residential accommodation.
 - C. Provision of a new Neighbourhood:** comprising sites within the Green Belt and at Fossetts Farm within Southend Borough.
 - D. New Development Outside the Borough:** including sites that could provide expanded new neighbourhoods on the edge of Southend located within the Green Belt in Southend Borough and Rochford District or sites elsewhere in South Essex.
- 2.7 **Table 2.1** on the next page sets out the options in further detail, in particular it indicates the sources of land supply and the potential number of new homes that could be delivered under each strategy option.

Table 2.1: Potential housing contribution by Strategy Option

Local Area	Development opportunities	Components of Strategy Option (Broad Type of Sites)	Potential No. of new homes (rounded)
Southend Borough	A. Increasing urban capacity	Sites with Planning Permissions ¹¹	3,700
		Windfall (no-sites)	4,000
		Existing Allocated Sites	1,200
		Urban Area Sites (previously developed land)	1,700
		Total (A)	10,600
	B. Facilitating urban change	Housing Regeneration Sites	850
		Employment Land Release Sites	750
		Sites on Agricultural Land within Settlement Limits	350
		Sites on Green Space within Settlement Limits ¹²	300
		Total (B)	2,250
Total supply within urban area (A + B)		12,850	
C. Provision of new neighbourhood on edge of Southend	Fossett Farm Sites	1,850	
	Sites currently designated as Green Belt	5,350 ¹³	
	Total (C)	7,200	
Total provision within Southend Borough (A+B+C)		20,050	
South Essex Local Authorities	D. Development outside the borough	Provision of new neighbourhood on edge of Southend in Southend Borough (Strategy Option C) PLUS Assistance from Rochford District Council to provide a series of new neighbourhoods on the edge of Southend currently designated as Green Belt ¹⁴	4,900 ¹⁵ <i>(Total C + D = 12,100)</i>
		Neighbourly help from elsewhere	To be confirmed
Total potential supply (A+B+C+D)		24,950	

2.8 It is important to note that the Strategy Options set out above are not mutually exclusive. This means that none of the options in isolation could be taken forward as the preferred approach and deliver the identified needs for the borough. It is likely that a hybrid or combined approach consisting of all four options will be required to deliver needs during the plan period.

2.9 The Refining the Options Document also covers a number of other key issues relating to the spatial strategy, such as transport, retail and green space, but it does not set out defined options for these issues as for the development opportunities outlined above. Under economic recovery and meeting employment needs, the Refining the Options Document identifies broad development types with a number of potential new employment land allocations underneath them.

¹¹ Includes both large (5 homes or more) [2,664 dwellings] and small sites (less than 5 homes) with planning permission and those sites being implemented as of April 2019 [1,026]

¹² Currently protected as public open space. The sites identified as having potential represent approximately 1% of all the protected green space in the Borough.

¹³ 4,600 homes estimated to be delivered within Plan Period to 2040

¹⁴ Exploring strategic scale development on the edge of Southend. [South East Essex Strategic Growth Locations Assessment 2019](#)

¹⁵ 3,950 homes estimated to be delivered within Plan Period to 2040

- 2.10 At this stage the IIA will focus on the Strategy Options set out above, as there is a defined set of options and in line with the SEA Regulations, they are most likely to give rise to significant effects.
- 2.11 Subsequent IIA Reports will consider combinations of these growth opportunities as spatial strategy alternatives, informed by an assessment of the individual sites (housing and employment) available for development in the borough.

Part 2: What are the IIA findings
at this current stage?

3. Introduction (to Part 2)

- 3.1 This part of the Interim IIA Report presents the summary findings of the appraisal of the four Strategy Options.

4. Summary assessment findings

Methodology

- 4.1 A comparative assessment of the four Strategy Options was carried out against the IIA framework. The assessment examines likely significant effects on the baseline, drawing on the sustainability objectives and themes identified through scoping (see Table 1.1) as a methodological framework.
- 4.2 Every effort is made to predict effects accurately; however, this is inherently challenging given the high level nature of the options under consideration. The ability to predict effects accurately is also limited by understanding of the baseline (now and in the future under a 'no plan' scenario). In light of this, there is a need to make considerable assumptions regarding how scenarios will be implemented 'on the ground' and what the effect on particular receptors would be. Where there is a need to rely on assumptions in order to reach a conclusion on a 'significant effect' this is made explicit in the appraisal text.
- 4.3 It is important to note that effects are predicted taking into account the criteria presented within the SEA Regulations. So, for example, account is taken of the duration, frequency and reversibility of effects. Cumulative effects are also considered (i.e. where the effects of the plan in combination with the effects of other planned or on-going activity).
- 4.4 Based on the evidence available a judgement is made if there is likely to be a significant effect. Where it is not possible to predict likely significant effects on the basis of reasonable assumptions, efforts are made to comment on the relative merits of the alternatives in more general terms and to indicate a rank of preference. The number indicates the rank and does not have any bearing on likely significant effects. This is helpful, as it enables a distinction to be made between the alternatives even where it is not possible to distinguish between them in terms of 'significant effects'. For example, if an option is ranked as 1 then it is judged to perform better against that ISA theme compared to an option that is ranked 2.

Summary assessment

4.5 The summary findings and conclusions of the detailed assessment of strategy options provided in **Appendix I** are presented below.

Table 4.1: Summary findings and conclusions for the Strategy Options

ISA Themes	Rank/ Significant effects	Categorisation and rank			
		Option A (Increasing Urban Capacity)	Option B (Facilitating Urban Change)	Option C (New Neighbourhood on edge of Southend)	Option D (Development outside the borough)
Biodiversity	Rank	1	1	2	3
	Significant effect?	No	No	Uncertain	Uncertain
Climate Change	Rank	=	=	=	=
	Significant effect?	Uncertain	Uncertain	Uncertain	Uncertain
Landscape and Historic Environment	Rank	1	2	3	4
	Significant effect?	Uncertain	Uncertain	Yes - Negative	Yes - Negative
Environmental Quality	Rank	1	1	3	2
	Significant effect?	Uncertain	Uncertain	Uncertain	Uncertain
Land, Soil and Water Resources	Rank	1	2	3	4
	Significant effect?	Yes - Positive	No	Yes - Negative	Yes - Negative
Population and Communities	Rank	3	3	2	1
	Significant effect?	Yes - Positive	Yes - Positive	Yes - Positive	Yes - Positive
Health and Wellbeing	Rank	2	3	2	1
	Significant effect?	Uncertain	Uncertain	Uncertain	Uncertain
Equality, diversity and inclusion	Rank	=	=	=	=
	Significant effect?	Uncertain	Uncertain	Uncertain	Uncertain
Transport and Movement	Rank	2	2	3	1
	Significant effect?	Uncertain	Uncertain	Uncertain	Uncertain
Economy	Rank	3	3	2	1
	Significant effect?	Uncertain	Uncertain	Yes - Positive	Yes - Positive

4.6 Firstly, it is important to recognise that the proposed options at this stage are not mutually exclusive, i.e. a hybrid approach is likely to be taken forward for further consideration and developed as the preferred approach. As a result, none of the options at this stage in isolation would deliver sufficient growth to meet identified needs (23,620 new homes over a 20-year period). It is likely that all four options will be required in some form to ensure that needs can be met during the plan period. Given the sites submitted through the call for sites process, development on greenfield/ Green Belt land in the north of the borough and within Rochford District will be required if these needs are to be met.

4.7 While all of the options are identified as having a significant effect for the **population and communities** theme, at this stage Option D is found to perform best as it provides the greatest opportunity to deliver a suitable mix of new homes, in particular affordable and family homes, and wider infrastructure to meet identified needs. Option C performs less well compared to Option D given the reduced level of growth. Options A and B perform similarly and are ranked lower than Options C and D as they are less likely to meet the needs of all residents. Previous strategies focusing on urban renewal have failed to deliver enough affordable and family homes to meet the needs of the borough.

- 4.8 Option C and in particular Option D are also found to perform better in terms of the **economy** theme compared to Options A and B, as they are more likely to deliver new employment land, schools and retail centres. While Option C could also deliver some of this it will not be to the same extent as Option D. While Options A and B focus growth close to existing employment and support the regeneration and vitality of existing centres in the borough, they do not provide an opportunity to deliver new employment land, schools and centres.
- 4.9 Options A and B generally perform better compared to Options C and D against the environmental themes (**biodiversity, landscape and historic environment, environmental quality and land soil and water resources**) as they focus growth on previously developed land. There is the potential for significant negative effects as a result of Options C and D in terms of the landscape and historic environment and the land, soil and water themes, as a result of the loss of greenfield/ agricultural land in the north of the borough and in Rochford District. The significance will be dependent to some extent on the quality of agricultural land. While there is a greater opportunity for enhancements under Option C and in particular Option D for some of the environmental IIA themes, such as biodiversity and landscape, these are uncertain at this stage and will need to be explored in more detail through plan-making and the IIA.
- 4.10 In terms of the **transport and movement** theme, at this stage the nature and significance of effects for all the options are uncertain. It is difficult to rank them as Options A and B will help to reduce the need to travel and encourage sustainable modes of transport early in the plan period. Whereas, Option C and in particular Option D provide an opportunity to deliver significant transport infrastructure improvements providing benefits later in the plan period. At this stage, the assessment found that Option D performs best as it provides an opportunity to deliver a new link road (multi-modal) that would by-pass some of the most constrained and congested junctions in the borough. Option C performs worst as it could not deliver the same kind of transport and wider infrastructure improvements compared to Option D and is also less likely reduce the need to travel compared to Options A and B through the focus of growth in close proximity to existing services/ facilities/ employment.
- 4.11 In terms of the **equalities** theme, it is difficult at this stage to significantly differentiate between the options as there are trade-offs between each of them in terms of the people and communities they will benefit and the timescales that these benefits would occur. Ultimately none of the options individually would help to meet the needs of all people in the borough or significantly help to reduce inequalities. A hybrid approach of the options is more likely to deliver the greatest range of benefits, meeting the needs of all people across the borough and helping to reduce inequalities and promote inclusion.
- 4.12 In terms of the **health** theme, the regeneration of previously developed land under Options A and B provides an opportunity to deliver new accessible green space and multifunctional green infrastructure within the existing urban area. However, the scale of this is unlikely to be significant in and there would also be limited opportunities to deliver new leisure/ recreational facilities. The regeneration/ rejuvenation of derelict and/ or underused brownfield land and the wider public realm is also likely to have indirect positive effects on health and wellbeing for existing communities.
- 4.13 Options C and in particular Option D would result in the loss of significant areas of greenfield land/ countryside on the edge of the urban area; however, it is understood that there is limited public access to these areas at present. The proposed new neighbourhoods, in particular under Option D, present an opportunity to delivery significant new areas of accessible open/ green space alongside new health and leisure facilities. There are also opportunities for the new neighbourhoods to link in with improvements being explored to the green infrastructure network across the sub-region through the South Essex Green and Blue Infrastructure Study (2020). This includes opportunities for a Strategic Park and wider Regional Parkland. Alongside wider active travel network improvements, this could help to improve accessibility to the wider countryside.
- 4.14 It is recognised that air quality can have implications for health and wellbeing. The findings of the assessment under the transport and environmental quality topics suggest that Options A and B will perform better in this regard by encouraging the use of sustainable transport modes

through focussing growth in close proximity to existing services, facilities and employment. However, in the short term these options could exacerbate existing air quality issues along the main road network with negative effects on health. In the longer term this is likely to be less of an issue as a result of the take up of electric vehicles. Option D offers the greatest potential to deliver significant new transport infrastructure, including a new link road (multi-modal) between the A127 and Shoeburyness that would by-pass some of the most constrained and congested junctions in the borough. In the longer term this would help to improve air quality and therefore the health and wellbeing as well as safety of existing communities in those areas.

- 4.15 For **climate change**, mitigation and adaptation are relevant considerations. With regards to climate change adaptation, a key consideration is flood risk. None of the options propose to deliver significant growth in an area currently at high risk from fluvial or coastal flooding. There are areas of high surface water flood risk throughout Southend; however, this is unlikely to present a significant barrier to development under any option or significantly increase flooding elsewhere if appropriate mitigation measures are delivered alongside new development proposals, such as permeable surfaces and the incorporation of sustainable drainage systems. Climate change predictions suggest that even under low emission scenarios that there will be a rise in sea level and increased risk of flooding. This is clearly a significant issue for any development within Southend and the increased risk from flooding from the sea will need to be taken into account through any development.
- 4.16 In respect of mitigation, a primary consideration is the need to minimise per capita emissions from transport by minimising the need to travel and supporting a modal shift away from car dependency, i.e. by supporting a shift to 'sustainable' modes of transport (walking, cycling, public transport, electric vehicles). In this context, the regeneration of brownfield land within the urban area proposed under Options A and B is likely to support modal shift early in the plan period through the delivery of new homes within walking distance or public transport to the excellent range of services, facilities and employment on offer within Southend. Options C and D will deliver growth away from the existing services/ facilities/ employment but are also likely to contribute significantly more funding for the delivery of new infrastructure and provide opportunities for comprehensive new transport and access routes. However, this is more likely to be delivered through Option D given the larger scale of growth compared to Option C and is uncertain at this stage. Another consideration is the need to support delivery of low carbon infrastructure (e.g. a ground source heat network; or solar PV with battery storage) and/or high standards of sustainable design and construction, such that the development can achieve net zero or, at least, CO₂ emissions standards that exceed the requirements of Building Regulations. While it is recognised that there are barriers to this, the delivery of large-scale new neighbourhoods under Option C, and in particular Option D, present more opportunities for the delivery of low carbon infrastructure through economies of scale.

5. Developing the Preferred Approach

- 5.1 At this stage there has been no decision made in terms of a preferred approach. The Council is currently seeking views from key stakeholders and the public on the options proposed and issues raised. As discussed above, the four Strategy Options are not mutually exclusive, and it is likely that a combination of them will be required to meet the needs of the borough during the life of the Local Plan. These potential combinations will be considered in depth during subsequent stages of the IIA process. The next chapter sets out the next steps for plan making and the IIA process

Part 3: What are the next steps?

6. Introduction (to Part 3)

6.1 The aim of this chapter is to explain next steps in the plan-making/ IIA process.

Next steps

- 6.2 This Interim IIA Report will accompany the Refining the Plan Options Document for public consultation commencing in August 2021. Any comments received will be reviewed and then taken into account as part of the iterative plan-making and IIA process. Following the consultation there will be consideration of site options, more clearly defined spatial strategy options as well as the assessment of plan policies for the delivery and management of growth.
- 6.3 The representations received along with further evidence base work, including further IIA work, will inform the development of a first draft of the Local Plan (Preferred Approach), which is scheduled to be published for consultation in 2022. An updated Interim IIA Report will accompany the Preferred Approach Local Plan consultation.

Appendix I: Assessment of Strategy Options

Introduction

Each of the Strategy Options identified in Chapter 2 were subject to a comparative appraisal under each IIA theme and the detailed findings are presented in this Appendix.

Method

For each of the options, the assessment examines likely significant effects on the baseline, drawing on the sustainability objectives and themes identified through scoping (see Table 1.1 in the main body of the report) as a methodological framework

Every effort is made to predict effects accurately; however, this is inherently challenging given the high level nature of the options under consideration. The ability to predict effects accurately is also limited by understanding of the baseline (now and in the future under a 'no plan' scenario). In light of this, there is a need to make considerable assumptions regarding how scenarios will be implemented 'on the ground' and what the effect on particular receptors would be. Where there is a need to rely on assumptions in order to reach a conclusion on a 'significant effect' this is made explicit in the appraisal text.

It is important to note that effects are predicted taking into account the criteria presented within the SEA Regulations. So, for example, account is taken of the duration, frequency and reversibility of effects. Cumulative effects are also considered (i.e. where the effects of the plan in combination with the effects of other planned or on-going activity).

Based on the evidence available a judgement is made if there is likely to be a significant effect. Where it is not possible to predict likely significant effects on the basis of reasonable assumptions, efforts are made to comment on the relative merits of the alternatives in more general terms and to indicate a rank of preference. The number indicates the rank and does not have any bearing on likely significant effects. This is helpful, as it enables a distinction to be made between the alternatives even where it is not possible to distinguish between them in terms of 'significant effects'. For example, if an option is ranked as 1 then it is judged to perform better against that ISA theme compared to an option that is ranked 2.

Appraisal of the Strategy Options

ISA Theme: Biodiversity

Options	Option A - Increasing Urban Capacity	Option B - Facilitating Urban Change	Option C - Provision of new Neighbourhood on edge of Southend	Option D - Development outside the borough
Rank	1	1	2	3
Significant effect?	No	No	Uncertain	Uncertain
Discussion	<p>Options A and B focus on the redevelopment/ regeneration of brownfield land and are therefore less likely to have significant impacts on biodiversity compared to Options C and D in terms of habitat loss and fragmentation. While Option B does propose the loss of some undeveloped land, it would only be small scale and not likely to be significant. It is also important to recognise that brownfield land can have biodiversity value, providing habitats for numerous important species; however, it is considered that there are often opportunities for mitigation to be delivered at a project level to ensure that there would be no residual significant negative effects. The regeneration of previously developed land also presents an opportunity to provide biodiversity enhancements within the urban area through the delivery of new habitats and improved connectivity. Equally, greenfield/ agricultural land does not always have high biodiversity value.</p> <p>All of the options propose growth within 5km of a number of international and nationally important designated wildlife sites and are therefore likely to increase levels of disturbance, through recreational activity as well as noise/ light pollution. A higher level of growth increases the likelihood for increased levels of disturbance and therefore significant negative effects on these designated sites. While some options could deliver a greater number of new homes it needs to be recognised that none of them could be carried forward individually as the preferred approach, as a result the overall level of growth has not been given significant weight through this assessment. In terms of recreational disturbance, any option would need to deliver suitable alternative areas for recreation in order to minimise potential impacts on the designated sites. This could be delivered more easily alongside development/ on site through the provision of new neighbourhoods on greenfield land under Options C and D. However, it is also recognised that suitable alternative spaces for recreation can also be delivered off site for the redevelopment of brownfield land proposed under Options A and B through the Community Infrastructure Levy (CIL) as well as through the measures proposed through the Essex Coastal Recreational disturbance Avoidance Mitigation Strategy (RAMS). The Essex Coast RAMS was adopted through an SPD by Southend Borough Council in October 2020.¹⁶</p> <p>There are areas of National Habitat Network Enhancement Zone 1 to the north of the urban Southend area, where there is the potential for the creation of and links to primary habitats, including, in this case, traditional orchards. Development on greenfield sites to the north in Southend and within Rochford District should avoid development in these areas where possible, as well as seeking any opportunities to join up existing habitat patches and improve the connections between them in any network enhancement zones. Any development delivered to the north of the Southend urban area will also need to protect and enhance green and blue infrastructure networks. In this respect the South Essex Green and Blue Infrastructure Study (2020)¹⁷ identifies opportunities for developing the green and blue infrastructure network across South Essex, including opportunities for a Southend strategic park and wider Regional Parkland.</p> <p>It is recognised that a hybrid of these options is likely to be taken forward, with further work carried out through plan-making and the IIA process to explore more detailed hybrid options and assess the likely significant effects. It will be important for the IIA at the next stage to inform the development of hybrid spatial strategy options that seek to minimise impacts on biodiversity and maximise opportunities for biodiversity net gain and network enhancements. A separate Habitats Regulations Assessment process is being carried out for the new Local Plan to consider the potential for likely significant effects on internationally important wildlife sites (including Special Areas</p>			

¹⁶ <https://www.southend.gov.uk/downloads/file/6848/essex-coast-rams-spd-adoption-statement>

¹⁷ <https://www.southessexplan.co.uk/south-esssex-plan/what-is-the-evidence-base>

ISA Theme: Biodiversity

of Conservation (SPA), Special Protection Areas (SPA) and Ramsar sites). HRA work will be carried out and inform the IIA process as well as the Local Plan (Preferred Approach). The HRA Report will be published alongside the Local Plan (Preferred Approach) in 2022.

At this stage, it is predicted that Options A and B are less likely to have a significant effect on biodiversity compared to Options C and D through the focus on the regeneration of brownfield land within the urban area. Option D proposes the greatest loss of undeveloped land and is therefore more likely to have a negative effect of significance compared to Option C. While there are more opportunities to deliver biodiversity net gain through Options C and in particular D, these are uncertain at this stage. There is likely to be more certainty around the delivery of net gain once the Environment Bill becomes an Act of Parliament.

ISA Theme: Climate Change

Options	Option A - Increasing Urban Capacity	Option B - Facilitating Urban Change	Option C - Provision of new Neighbourhood on edge of Southend	Option D - Development outside the borough
Rank	=	=	=	=
Significant effect?	Uncertain	Uncertain	Uncertain	Uncertain
Discussion	<p>For this IIA topic, climate change mitigation and adaptation are relevant considerations. In respect of mitigation, a primary consideration is the need to minimise per capita emissions from transport by minimising the need to travel and supporting a modal shift away from car dependency, i.e. by supporting a shift to ‘sustainable’ modes of transport (walking, cycling, public transport, electric vehicles). In this context, the regeneration of brownfield land within the urban area proposed under Options A and B is likely to support modal shift early in the plan period through the delivery of new homes within walking distance or public transport to the excellent range of services, facilities and employment on offer within Southend. Options C and D will deliver growth away from the existing services/ facilities/ employment but are also likely to contribute significantly more funding for the delivery of new infrastructure and provide opportunities for comprehensive new transport and access routes. However, this is more likely to be delivered through Option D given the larger scale of growth compared to Option C and is uncertain at this stage. The key challenge will be to minimise the need to travel from these new neighbourhoods and if there is a need to travel into Southend or beyond, that the community has an opportunity to do this via accessible and frequent public transport.</p> <p>Another consideration is the need to support delivery of low carbon infrastructure (e.g. a ground source heat network; or solar PV with battery storage) and/or high standards of sustainable design and construction, such that the development can achieve net zero or, at least, CO₂ emissions standards that exceed the requirements of Building Regulations. While it is recognised that there are barriers to this, the delivery of large-scale new neighbourhoods under Options C and D present more opportunities for the delivery of low carbon infrastructure through economies of scale compared to Options A and B.</p> <p>With regards to climate change adaptation, a key consideration is flood risk. None of the options propose to deliver significant growth in an area currently at high risk from fluvial or coastal flooding.¹⁸ There are areas of high surface water flood risk throughout Southend¹⁹; however, this is unlikely to present a significant barrier to development under any option or significantly increase flooding elsewhere if appropriate mitigation measures are delivered alongside new development proposals, such as permeable surfaces and the incorporation of sustainable drainage systems. Climate change predictions suggest that even under low emission scenarios that there will be a rise in sea level and increased risk of flooding.²⁰ This is clearly a significant issue for any development within Southend and the increased risk from flooding from the sea will need to be taken into account through any development.</p> <p>At this stage, it is difficult to identify any options that perform substantially better than others in terms of climate change given uncertainties. It is recognised that a hybrid of these options is likely to be taken forward, with further work carried out through plan-making and the IIA process to explore more detailed hybrid options and assess the likely significant effects. It will be important for the IIA at the next stage to inform the development of hybrid spatial strategy options that provide opportunities to encourage a modal shift and deliver low carbon infrastructure while also taking into account of the predicted increased risk from flooding.</p>			

¹⁸ Environment Agency Flood map for planning. Available [online]: <https://flood-map-for-planning.service.gov.uk/>

¹⁹ Scott Wilson (2010) Southend-on-Sea Strategic Flood Risk Assessment Level 1[online] available at:

http://www.southend.gov.uk/downloads/file/1690/southend_flood_risk_assessment_-_level_1_main_reportpdf

²⁰ UK Climate Projections (UKCP). Available [online]: <https://www.metoffice.gov.uk/research/approach/collaboration/ukcp/index>

ISA Theme: Landscape and historic environment

Options	Option A - Increasing Urban Capacity	Option B - Facilitating Urban Change	Option C - Provision of new Neighbourhood on edge of Southend	Option D - Development outside the borough
Rank	1	2	3	4
Significant effect?	Uncertain	Uncertain	Yes - Negative	Yes - Negative
Discussion	<p>In terms of landscape and townscape character, Options A and B are less likely to have a significant negative effect as the focus for growth is on the regeneration of brownfield land within settlement limits. This is based on the assumption that significantly increased densities would not be required to deliver either Option A or B. It is recognised that Option B also proposes development on some green space and agricultural land within settlement limits but given the small-scale proposed it is unlikely to have a significant negative effect on the landscape or townscape. The regeneration of previously developed land provides opportunities to enhance the townscape through the removal of derelict or underused buildings with high quality development and wider public realm improvements.</p> <p>Option C proposes the development of a new neighbourhood or neighbourhoods on the edge of the existing urban area of Southend in the north. New housing and employment would be delivered on greenfield/ agricultural land identified as having low to medium landscape sensitivity through the Landscape Character, Sensitivity and Capacity Study (2019). The delivery of around 7,000 new dwellings in this area is likely to permanently change the landscape in the north of the borough. While the significance of effects on landscape are dependent on a number of factors, including the design and layout of development, it is predicted that the permanent loss of greenfield/ agricultural land in this area will have a long term negative effect on the landscape. At this stage, it is uncertain if this is likely to be significant given that it will be within an area identified through the Landscape Character, Sensitivity and Capacity Study (2019) as having low to medium landscape sensitivity and medium to high capacity to accommodate growth.</p> <p>Option D proposes building on Option C with the delivery of new homes within Rochford District (approx. 4,890 dwellings), which would contribute to meeting the needs of both Rochford and Southend. While the precise location of these new neighbourhoods is not known, it is likely that the new neighbourhoods within Rochford District would fall within areas identified as having medium and medium to high landscape sensitivity in the Landscape Character, Sensitivity and Capacity Study (2019). Development is also likely to fall within areas identified as having medium and low to medium capacity to accommodate growth. Taking the findings of the Landscape Character, Sensitivity and Capacity Study (2019) into account, it is likely that the development of new neighbourhoods in these areas would have a long term significant negative effect on the landscape.</p> <p>In terms of the historic environment, there are designated heritage assets spread across Southend, both within the urban area as well as on the greenfield/ agricultural land in the north and beyond into Rochford District. A number of areas within the urban part the borough, including within the centres of Shoeburyness, Southend-on-Sea and of Leigh-on-Sea, have a rich historic environment resource, with the largest concentration of listed buildings and other heritage assets in the borough. Without high quality and sensitive design and layout, the approaches proposed by Options A and B therefore have the potential to lead to significant impacts on the fabric and setting of key features and areas of cultural heritage interest. The regeneration of brownfield land however in many cases offers considerable opportunities for enhancements to the fabric and setting of features and areas of historic environment interest, and for supporting their significance. This is dependent though on the location, design, layout and density of development and the overall viability of the scheme.</p> <p>Options C and D propose the delivery of new neighbourhoods on greenfield/ agricultural land within the north of Southend and within Rochford District respectively. There are a range of designated heritage assets within these areas, included listed buildings and scheduled monuments. While the precise location of development is not known at this stage, development would result in the loss of greenfield and agricultural land within the setting of a number of designated heritage assets. There is therefore the potential for a significant long-term negative effect. Effective masterplanning will be key to minimising impacts of development on the historic environment and designated heritage assets as well as identifying opportunities for enhancement.</p>			

ISA Theme: Landscape and historic environment

It is recognised that a hybrid of these options is likely to be taken forward, with further work carried out through plan-making and the IIA process to explore more detailed hybrid options and assess the likely significant effects. Option D has the greatest likelihood to result in residual significant negative effects on the landscape and historic environment. Option C is also identified as having the potential for a significant negative effect through large-scale development in a previously undeveloped area. While Options A and B present opportunities to deliver a positive effect on townscape and the historic environment through the regeneration of brownfield land, this will be dependent on the design, layout, density and viability of development.

Where possible, the IIA will explore the trade-offs between hybrid options that seek to maximise the use of brownfield land (potentially through increased densities within the urban area and around key transport nodes) compared to options that rely more on the delivery of development on greenfield/ agricultural land. This will help to inform a preferred approach that seeks to minimise impacts on the landscape and historic environment as well as maximise potential opportunities for enhancements.

ISA Theme: Environmental Quality

Options	Option A - Increasing Urban Capacity	Option B - Facilitating Urban Change	Option C - Provision of new Neighbourhood on edge of Southend	Option D - Development outside the borough
Rank	1	1	3	2
Significant effect?	Uncertain	Uncertain	Uncertain	Uncertain
Discussion	<p>This ISA topic deals with a number of different issues, including air quality, water quality and contaminated land. The redevelopment of brownfield land offers significant opportunities for the remediation of contaminated land - and as such Options A and B should potentially be ranked better in this regard.</p> <p>Development under any of the options could have impacts on water quality, with a number of water courses flowing through the Southend urban areas as well as in the north with them all eventually flowing into the River Thames or the Roach. The Environment Agency classified the River Roach as having a moderate water body status, and the reasons for not achieving good status are identified as sewage discharge as well as poor nutrient management as a result of agriculture. The River Thames in the south (Thames Lower catchment) and the EA classified it as having moderate water body status, and the reasons for not achieving good status are identified as sewage discharge, landfill leaching, contaminated land, land drainage and urbanisation. It will important to have early discussions with Anglian Water on the capacity of waste water treatment works that will serve development and the potential need for infrastructure improvements and phasing of development to avoid impacts on water quality. Further to this, development under any of the options should seek to deliver sustainable drainage schemes and protect and enhance green infrastructure which can have positive effects on water quality. At this stage there are no significant differences between the options in terms of water quality.</p> <p>In terms of air quality, within Southend there are issues with traffic congestion at key junctions, particularly along the A127 and A13, and around the town centre and on Sutton Road. In November 2016 Southend-on-Sea Borough Council declared an Air Quality Management Area (AQMA) centred at the junction between Prince Avenue, Holeythick Lane and Rochford Road (also known as "The Bell Junction"). It was then extended to include the roundabout where the A127 meets the A1159 (Cuckoo Corner). The AQMA was declared as a result of exceedance's of NO₂ from road traffic. There is also a newly declared AQMA at the junction of the A127 with East/West Street in Prittlewell.</p> <p>Development proposed under any of the options will have transport and therefore air quality impacts, requiring a strategic approach to the delivery of new or enhanced infrastructure to address congestion and encourage the use of more sustainable modes of transport. Taking the findings of the assessment under the transport topic paper into consideration, Options A and B will help to reduce the need to travel and encourage the use of sustainable modes of transport early in the plan period by focussing growth within the urban area close to existing services/ facilities/ employment. Option C and in particular Option D provide an opportunity to deliver significant transport infrastructure improvements with potential benefits later in the plan period. However, there are uncertainties over the delivery of new transport infrastructure in particular for Option C. Further work is being carried out by the Council and the Association of South Essex Local Authorities to address the transport impacts of growth in the sub-region and consider potential mitigation measures.</p> <p>It is recognised that a that a hybrid of these options is likely to be taken forward, with further work carried out through plan-making and the IIA process to explore more detailed and mutually exclusive spatial strategy options. At this stage the nature and significance of effects for all the options are uncertain in relation to air quality. Options A and B are considered to perform better under this ISA topic as they provide an opportunity to remediate contaminated land and encourage the use of sustainable modes of transport which will help to minimise impacts on air quality, particularly in the short term. Option D performs better than Option C as there is more scope to deliver significant transport infrastructure improvement and minimise impacts on air quality in the longer term.</p>			

ISA Theme: Land, Soil and Water Resources

Options	Option A - Increasing Urban Capacity	Option B - Facilitating Urban Change	Option C - Provision of new Neighbourhood on edge of Southend	Option D - Development outside the borough
Rank	1	2	3	4
Significant effect?	Yes - Positive	No	Yes - Negative	Yes - Negative
Discussion	<p>There are no significant differences between the options in terms of water resources and none are likely to have a significant effect. While some options propose a higher level of growth, any increased demand would be addressed through other legislative and plan-making processes, in particular the development of regional and water company level water resource management plans.</p> <p>In terms of land and soil resources, Option A (Increasing Urban Capacity) performs the best compared to the other options and is predicted to have a significant long-term positive effect through its focus on the redevelopment of brownfield land. While Option B (Facilitating Urban Change) also seeks the regeneration of previously developed land and therefore performs well compared to Options C and D, it also proposes development on greenfield/ agricultural land within the settlement limits. Given the small-scale loss of green space/ agricultural land under Option B it is not likely that there would be a significant effect.</p> <p>Option C (Provision of new Neighbourhood on edge of Southend) proposes development on greenfield and agricultural land within the borough to the north. There is the potential for a significant long-term negative effect on this ISA theme through the significant loss of greenfield land classified as the best and most versatile agricultural land and sterilisation of brickearth deposits. Option D expands on Option C and would also result in the loss of greenfield/ and best and most versatile agricultural land plus brickearth deposits. While the brickearth deposits are not currently worked, the Essex Minerals Local Plan (2014) indicates that they could be in the future. Southend Core Strategy Policy CP5 protects brickearth deposits.</p> <p>It is recognised that a that a hybrid of these options is likely to be taken forward, with further work carried out through plan-making and the IIA process to explore more detailed hybrid options and assess the likely significant effects. Where possible and in line with national policy, it is recommended that the hybrid options should explore the potential to maximise the use of brownfield land (potentially through increased densities within the urban area and around key transport nodes) and therefore minimise the loss of greenfield and best and most versatile agricultural land.</p>			

ISA Theme: Population and communities

Options	Option A - Increasing Urban Capacity	Option B - Facilitating Urban Change	Option C - Provision of new Neighbourhood on edge of Southend	Option D - Development outside the borough
Rank	3	3	2	1
Significant effect?	Yes - Positive	Yes - Positive	Yes - Positive	Yes - Positive
Discussion	<p>It is recognised that the proposed options at this stage are not mutually exclusive, i.e. a hybrid approach is likely to be taken forward for further consideration. As a result, none of the options at this stage in isolation would deliver the required number of homes to meet identified needs (23,620 new homes over a 20-year period). It is likely that all four options will be required in some form to ensure that identified needs can be met during the plan period. Given the sites submitted through the call for sites process, it is not likely needs could be met without some development on greenfield/ Green Belt land in the north and within Rochford District.</p> <p>Focussing growth within the urban areas under Options A and B is likely to deliver a number of positive effects in relation to population and communities. It would likely contribute positively towards maintaining and enhancing the vitality and vibrancy of existing urban communities through the regeneration of derelict and/or underused brownfield land and the wider public realm. The new homes would be delivered in areas with excellent access to existing facilities and services. Options A and B are more likely to deliver homes quickly in the plan period to meet needs compared to large scale sites proposed under Options C and D. The focus on the urban area also help to avoid the loss of Green Belt land to the north of Southend and protect the identities of existing communities in that area. Conversely, the regeneration of brownfield land is unlikely to deliver any significant new community infrastructure with needs being met through the expansion of existing community infrastructure where possible. Given the urban nature of Southend, there is likely to be limited opportunities for the expansion of existing community infrastructure and this will place increased pressure on existing services/ facilities with a long-term negative effect on this ISA topic. The regeneration of a large number of small-scale brownfield sites could also make it difficult to deliver a suitable mix of homes, in particular family and affordable homes, to meet the needs of all the population. This has been demonstrated through previous strategies that have focussed on urban renewal as the preferred approach.</p> <p>The delivery of new neighbourhoods under Option C and in particular Option D could provide significant new community infrastructure, including shops, schools and health facilities. There is greater potential to deliver a wider mix of new homes, in particular affordable and family homes, to meet the needs of all the population on the large-scale sites proposed through Options C and D. However, there are generally longer lead in times associated with large scale sites so new homes and infrastructure is likely to be delivered later in the plan period and would not help meet short term needs. Option C and in particular Option D would also result in the loss of significant areas of Green Belt land and could result in coalescence with some existing communities unless carefully managed.</p> <p>It is recognised that a hybrid of these options is likely to be taken forward, with further work carried out through plan-making and the IIA process to explore more detailed hybrid options and assess the likely significant effects. A balance will need to found between the options to ensure the delivery of new homes, employment and infrastructure to meet needs throughout the plan period and for all sectors of the community. At this stage, Option D performs the best against this IIA theme as it provides the best opportunity to deliver new homes, in particular affordable and family homes, and wider infrastructure to meet identified needs. Option C performs less well compared to Option D given the reduced level of growth. Options A and B perform similarly and are ranked lower than Options C and D as they are less likely to meet the needs of residents and are less likely to deliver affordable and family homes.</p>			

ISA Theme: Health and wellbeing

Options	Option A - Increasing Urban Capacity	Option B - Facilitating Urban Change	Option C - Provision of new Neighbourhood on edge of Southend	Option D - Development outside the borough
Rank	2	3	2	1
Significant effect?	Uncertain	Uncertain	Uncertain	Uncertain
Discussion	<p>The regeneration of previously developed land under Options A and B provides an opportunity to deliver new accessible green space and multifunctional green infrastructure within the existing urban area. However, the scale of this will be dependent on the density of development and is unlikely to be significant. Option B would result in the loss of some green space within the settlement limits and this would have a negative effect on health and wellbeing; however, it is unlikely to be significant given the small-scale loss. Options A and B are unlikely to deliver any significant new health or leisure facilities and therefore existing facilities would need to be expanded to serve an increasing population. Given the urban nature of Southend there are limited opportunities for the expansion of existing facilities. The regeneration/ rejuvenation of derelict and/ or underused brownfield land and the wider public realm is also likely to have positive impacts on health and wellbeing for existing communities.</p> <p>Options C and in particular Option D would result in the loss of significant areas of greenfield land/ countryside on the edge of the urban area; however, it is understood that there is limited public access to these areas at present. The proposed new neighbourhoods present an opportunity to deliver significant new areas of accessible open/ green space alongside new health and leisure facilities. There are also opportunities for the new neighbourhoods to link in with improvements being explored to the green infrastructure network across the sub-region through the South Essex Green and Blue Infrastructure Study (2020). This includes opportunities for a Strategic Park and wider Regional Parkland. Alongside wider active travel network improvements, this could help to improve accessibility to the wider countryside. These benefits are more likely to be delivered under Option D.</p> <p>It is recognised that air quality can have implications for health and wellbeing. The findings of the assessment under the transport and environmental quality topics suggest that Options A and B will perform better in this regard by encouraging the use of sustainable transport modes through focussing growth in close proximity to existing services, facilities and employment. However, in the short term these options could exacerbate existing air quality issues along the main road network with negative effects on health. In the longer term this is likely to be less of an issue as a result of the take up of electric vehicles; however, there are still pollutants associated with the use of these vehicles from the wear of tyres. Option D offers the greatest potential to deliver significant new transport infrastructure, including a new link road (multi-modal) between the A127 and Shoeburyness that would by-pass some of the most constrained and congested junctions in the borough. In the longer term this would help to improve air quality and therefore the health and wellbeing as well as safety of existing communities in those areas.</p> <p>It is recognised that a hybrid of these options is likely to be taken forward, with further work carried out through plan-making and the IIA process to explore more detailed hybrid options and assess the likely significant effects. At this stage, while Options C and D would result in the loss of large areas of greenfield land and open space they, in particular Option D, present an opportunity to deliver new accessible space for recreation, including new health and leisure facilities. There are also greater opportunities through Option D to contribute and link in with wider green infrastructure improvements in the sub-region. Option B performs less well compared to Option A as it would result in the loss of green space within the urban area.</p>			

ISA Theme: Equalities, diversity and inclusion

Options	Option A - Increasing Urban Capacity	Option B - Facilitating Urban Change	Option C - Provision of new Neighbourhood on edge of Southend	Option D - Development outside the borough
Rank	=	=	=	=
Significant effect?	Uncertain	Uncertain	Uncertain	Uncertain
Discussion	<p>None of the options in isolation are likely to meet the housing needs of all people in the borough. Options A and B provide increased scope for delivering regeneration activities which support the quality of life of residents in more deprived parts of the borough. This would be accompanied with improvements to existing community services/ facilities; however, it is uncertain how much scope there is to expand or improve on existing services/ facilities and if this would be sufficient to meet increased needs. The regeneration/ rejuvenation of previously developed land, if designed sensitively and accompanied alongside opportunities for employment and accessible community infrastructure, can help to reduce inequalities and address some of the high levels of deprivation within the urban area. Under these options it might though be difficult to deliver a sufficient mix of housing, in particular affordable and family homes, to meet the needs for all people in the borough. Previous strategies of urban renewal have not delivered enough affordable and family homes to meet needs.</p> <p>Options C and D would deliver new neighbourhoods and therefore new communities in the north of Southend outside the urban area and within Rochford District. Given economies of scale and developer contributions, these options are more likely to deliver significant new community infrastructure that would meet the needs of the new communities, potentially also serving some existing urban communities. There would also be greater scope to deliver a wider mix of new homes, in particular family and affordable homes, to meet needs for a broader range of needs. These options would however do less to support regeneration activities and reduce inequalities in the more deprived urban communities of the borough</p> <p>It is difficult at this stage to significantly differentiate between the options in terms of equalities, diversity and inclusion - there are trade-offs between each of the options in terms of the people and communities they will benefit and the timescales that these benefits would occur. Ultimately none of the options individually would help to meet the needs of all people in the borough or significantly help to reduce inequalities. A hybrid approach of the options is more likely to deliver the greatest range of benefits, meeting the needs of all people across the borough and helping to reduce inequalities and promote inclusion.</p>			

ISA Theme: Transport and movement

Options	Option A - Increasing Urban Capacity	Option B - Facilitating Urban Change	Option C - Provision of new Neighbourhood on edge of Southend	Option D - Development outside the borough
Rank	2	2	3	1
Significant effect?	Uncertain	Uncertain	Uncertain	Uncertain
Discussion	<p>There are issues with traffic congestion within Southend at key junctions on the road network, particularly along the A127 and A13, and around the town centre and on Sutton Road. The borough has a number of major bus routes that are all affected by traffic congestion and a lack of priority measures. There are a number of cycle routes but there are gaps in this provision, with limited north-south cycleways and a lack of an overall network. While tourism is important for the economy it also exacerbates congestion at certain points during the year.</p> <p>Development proposed under any of the options will have transport impacts and require a strategic approach to the delivery of new or enhanced infrastructure to address congestion and encourage the use of more sustainable modes of transport. The regeneration of brownfield land proposed under Options A and B will deliver new homes in close proximity to existing services/ facilities/ employment which is likely to encourage the use of sustainable modes of transport and help reduce the need to travel early in the plan period. This will help to minimise impacts on the already congested road network. It is unlikely that there will be any significant opportunities to improve transport infrastructure as a result of these options and it is also not clear at this stage how much scope there is to expand/ enhance existing services/ facilities to meet increasing long-term needs. While Option B also proposes development on some greenfield/ agricultural land and on green space this would be within settlement limits, and the impacts as a result of development on these sites would not differ substantially to the regeneration of previously developed land in terms of transport.</p> <p>Options C and D propose the delivery of new neighbourhoods outside the urban area of Southend to the north and within Rochford District. The significance of the impact as a result of Options C and D are dependent on a number of factors, in particular the level of services/ facilities and employment to be delivered as part of the new neighbourhoods and the opportunities for delivering improved transport infrastructure. Given the nature of Southend and the existing road network, without any significant improvements to transport infrastructure new communities within the proposed areas would exacerbate existing congestion issues as they would still need to utilise the A127 and A13 to access the Thames Gateway centres and London.</p> <p>The delivery of the new neighbourhoods under Options C and D provide greater scope to potentially improve transport infrastructure given the economies of scale. It is understood that there is the potential to deliver a rapid transit corridor linking with the A127 as part of a holistic approach to movement and link into a broader network. This could be complemented by an enhanced central “hub” location for bus/ rail/ rapid transit linkages (location to be determined) and potentially a hub at the Airport. There is also the potential to deliver comprehensive walking and cycle networks throughout the new neighbourhoods and beyond. It is assumed that the transport infrastructure improvements are more likely to be delivered under Option D given the economies of scale. Option D presents an opportunity to deliver a new link road (multi-modal) between the A127 and Shoeburyness that would by-pass some of the most constrained and congested junctions in the borough. At this stage, there are uncertainties over the delivery of transport infrastructure improvements and further work is being carried out by the Council and the Association of South Essex Authorities to address the transport impacts of growth across the sub-region. This is discussed in further detail below.</p> <p>The new communities proposed under Option C and in particular Option D are more likely to deliver significant improvements in terms of new community infrastructure compared to Options A and B. This includes the delivery of new schools and health facilities to serve the new as well as existing communities. In this context, the new neighbourhoods could provide a level of self-containment, which might limit the anticipated increase in commuters along the A127 and A13 corridor. However, this is unlikely in the early years of the plan when the number of homes built is likely to be too small to sustain a significant level of new community infrastructure; however in the longer-term this will reduce adverse effects given the existing capacity constraints.</p>			

ISA Theme: Transport and movement

The Council is updating its multi-modal model to consider transport impacts and implications of different options for the delivery of growth to meet identified needs. It is understood that evidence base work has been commissioned by the Association of South Essex Local Authorities (ASELA) on transport issues to inform the South Essex Strategic Framework. At a regional level, the Government has established Transport East to address how transport can be improved across the whole of the East of England.

It is recognised that a hybrid of these options is likely to be taken forward, with further work carried out through plan-making and the IIA process to explore more detailed and mutually exclusive spatial strategy options. If available, the further transport evidence base outlined above will inform the development and assessment of these spatial strategy options. At this stage the nature and significance of effects for all the options are uncertain. It is also difficult to rank them as Options A and B will help to reduce the need to travel and encourage sustainable modes of transport early in the plan period. Whereas, Option C and in particular Option D provide an opportunity to deliver significant transport infrastructure improvements providing benefits later in the plan period. At this stage, Option D performs best as it provides an opportunity to deliver a new link road (multi-modal) that would by-pass some of the most constrained and congested junctions in the borough. Option C performs worst as it could not deliver the same kind of transport and wider infrastructure improvements compared to Option D and is also less likely reduce the need to travel compared to Options A and B through the focus of growth in close proximity to existing services/ facilities/ employment.

ISA Theme: Economy

Options	Option A - Increasing Urban Capacity	Option B - Facilitating Urban Change	Option C - Provision of new Neighbourhood on edge of Southend	Option D - Development outside the borough
Rank	3	3	2	1
Significant effect?	Uncertain	Uncertain	Yes - Positive	Yes - Positive
Discussion	<p>The Refining Policy Options Document does not provide any detail or indicate any differences between the Strategy Options in terms of new employment land. Therefore, in line with the 'Meeting Employment Needs' Section of the document, it is assumed that a sufficient number of new jobs/ new employment land could be delivered under any of the options to meet identified needs.</p> <p>Option B proposes the release of outmoded and/ or underused employment land. Whilst this will lead to some loss of employment land, this is unlikely to have a significant effect given the small-scale nature of the release and the nature of employment land that will be released. The regeneration of previously developed land under Options A and B would be likely to deliver new homes in close proximity to existing employment opportunities within Southend. This will support accessibility to economic opportunities in the borough. Further benefits include indirect positive effects on the local economy through the regeneration of derelict and underused brownfield land, with associated improvements in the public realm. This will support the visitor economy through enhancing townscape character in key locations, including the Southend Central Area as well as the Central Seafront Area. It will also help to support the economic vitality of retail centres within Southend. Options A and B will not provide an opportunity to deliver new employment land, schools and centres.</p> <p>While the new communities proposed under Options C and D are located further from existing employment opportunities within Southend compared to Options A and B, they do offer the potential for significant improvements to transport infrastructure and access routes between them, including improved links to London Southend Airport. However, as noted under the transport topic this is uncertain at this stage and more likely to be delivered under Option D. Any significant improvements to transport infrastructure, including rapid transport corridors would have a positive effect on the wider economy of the borough. It is expected that the new neighbourhoods would support the vitality of existing retail centres in Southend to a certain extent but this is more likely to be the larger centres, such as Southend Town Centre. It is expected that the new neighbourhoods will include some form of local centres to meet everyday needs as well as new employment land and schools. In terms of tourism and the visitor economy, in the longer term once the new neighbourhoods have been built out there is the potential to provide visitors with access to new landscapes - including the potential strategic park and wider Regional Parkland proposed through the South Essex Blue and Green Infrastructure Study. However, the new neighbourhoods will not help to regenerate and rejuvenate areas such as Southend Central Area as well as the Central Seafront Area.</p> <p>It is recognised that a hybrid of these options is likely to be taken forward, with further work carried out through plan-making and the IIA process to explore more detailed and mutually exclusive spatial strategy options. Overall, it is considered that Options D performs best as it is most likely to deliver new employment land, schools and centres compared to the other options. While Option C could also deliver some of these it will not be to the same extent as Option D. While Options A and B support the regeneration and vitality of existing centres in the borough they do not provide an opportunity to deliver new employment land, schools and centres.</p>			

IIA summary findings

Summary findings and conclusions for Strategy Options

ISA Themes	Rank/ Significant effects	Categorisation and rank			
		Option A - Increasing Urban Capacity	Option B - Facilitating Urban Change	Option C - Provision of new Neighbourhood on edge of Southend	Option D - Development outside the borough
Biodiversity	Rank	1	1	2	3
	Significant effect?	No	No	Uncertain	Uncertain
Climate Change	Rank	=	=	=	=
	Significant effect?	Uncertain	Uncertain	Uncertain	Uncertain
Landscape and Historic Environment	Rank	1	2	3	4
	Significant effect?	Uncertain	Uncertain	Yes - Negative	Yes - Negative
Environmental Quality	Rank	1	1	3	2
	Significant effect?	Uncertain	Uncertain	Uncertain	Uncertain
Land, Soil and Water Resources	Rank	1	2	3	4
	Significant effect?	Yes - Positive	No	Yes - Negative	Yes - Negative
Population and Communities	Rank	3	3	2	1
	Significant effect?	Yes - Positive	Yes - Positive	Yes - Positive	Yes - Positive
Health and Wellbeing	Rank	2	3	2	1
	Significant effect?	Uncertain	Uncertain	Uncertain	Uncertain
Equality, diversity and inclusion	Rank	=	=	=	=
	Significant effect?	Uncertain	Uncertain	Uncertain	Uncertain
Transport and Movement	Rank	2	2	3	1
	Significant effect?	Uncertain	Uncertain	Uncertain	Uncertain
Economy	Rank	3	3	2	1
	Significant effect?	Uncertain	Uncertain	Yes - Positive	Yes - Positive

Firstly, it is important to recognise that the proposed options at this stage are not mutually exclusive, i.e. a hybrid approach is likely to be taken forward for further consideration and developed as the preferred approach. As a result, none of the options at this stage in isolation would deliver sufficient growth to meet identified needs (23,620 new homes over a 20-year period). It is likely that all four options will be required in some form to ensure that needs can be met during the plan period. Given the sites submitted through the call for sites process, development on greenfield/ Green Belt land in the north of the borough and within Rochford District will be required if these needs are to be met.

While all of the options are identified as having a significant effect for the **population and communities** theme, at this stage Option D is found to perform best as it provides the greatest opportunity to deliver a suitable mix of new homes, in particular affordable and family homes, and wider infrastructure to meet identified needs. Option C performs less well compared to Option D given the reduced level of growth. Options A and B perform similarly and are ranked lower than Options C and D as they are less likely to meet the needs of all residents. Previous strategies focusing on urban renewal have failed to deliver enough affordable and family homes to meet the needs of the borough.

Option C and in particular Option D are also found to perform better in terms of the **economy** theme compared to Options A and B, as they are more likely to deliver new employment land, schools and retail centres. While Option C could also deliver some of this it will not be to the same extent as Option D. While Options A and B focus growth close to existing employment and support the regeneration and vitality of existing centres in the borough, they do not provide an opportunity to deliver new employment land, schools and centres.

Options A and B generally perform better compared to Options C and D against the environmental themes (**biodiversity, landscape and historic environment, environmental quality and land soil and water resources**) as they focus growth on previously developed land. There is the potential for significant negative effects as a result of Options C and D in terms of the landscape and historic environment and the land, soil and water themes, as a result of the loss of greenfield/ agricultural land in the north of the borough and in Rochford District. The significance will be dependent to some extent on the quality of agricultural land. While there is a greater opportunity for enhancements under Option C and in particular Option D for some of the environmental IIA themes, such as biodiversity and landscape, these are uncertain at this stage and will need to be explored in more detail through plan-making and the IIA.

In terms of the **transport and movement** theme, at this stage the nature and significance of effects for all the options are uncertain. It is difficult to rank them as Options A and B will help to reduce the need to travel and encourage sustainable modes of transport early in the plan period. Whereas, Option C and in particular Option D provide an opportunity to deliver significant transport infrastructure improvements providing benefits later in the plan period. At this stage, the assessment found that Option D performs best as it provides an opportunity to deliver a new link road (multi-modal) that would by-pass some of the most constrained and congested junctions in the borough. Option C performs worst as it could not deliver the same kind of transport and wider infrastructure improvements compared to Option D and is also less likely reduce the need to travel compared to Options A and B through the focus of growth in close proximity to existing services/ facilities/ employment.

In terms of the **equalities** theme, it is difficult at this stage to significantly differentiate between the options as there are trade-offs between each of them in terms of the people and communities they will benefit and the timescales that these benefits would occur. Ultimately none of the options individually would help to meet the needs of all people in the borough or significantly help to reduce inequalities. A hybrid approach of the options is more likely to deliver the greatest range of benefits, meeting the needs of all people across the borough and helping to reduce inequalities and promote inclusion.

In terms of the **health** theme, the regeneration of previously developed land under Options A and B provides an opportunity to deliver new accessible green space and multifunctional green infrastructure within the existing urban area. However, the scale of this is unlikely to be significant in and there would also be limited opportunities to deliver new leisure/ recreational facilities. The regeneration/ rejuvenation of derelict and/ or underused brownfield land and the wider public realm is also likely to

have indirect positive effects on health and wellbeing for existing communities. Options C and in particular Option D would result in the loss of significant areas of greenfield land/ countryside on the edge of the urban area that are likely to be currently used by existing urban residents for recreation. However, it is understood that there is limited public access to these areas at present. Conversely, the proposed new neighbourhoods, in particular under Option D, present an opportunity to deliver significant new areas of accessible open/ green space alongside new health and leisure facilities. There are also opportunities for the new neighbourhoods to link in with improvements being explored to the green infrastructure network across the sub-region through the South Essex Green and Blue Infrastructure Study (2020). This includes opportunities for a strategic park and wider Regional Parkland. Alongside wider active travel network improvements, this could help to improve accessibility to the wider countryside.

It is recognised that air quality can have implications for health and wellbeing. The findings of the assessment under the transport and environmental quality topics suggest that Options A and B will perform better in this regard by encouraging the use of sustainable transport modes through focussing growth in close proximity to existing services, facilities and employment. However, in the short term these options could exacerbate existing air quality issues along the main road network with negative effects on health. In the longer term this is likely to be less of an issue as a result of the take up of electric vehicles. Option D offers the greatest potential to deliver significant new transport infrastructure, including a new link road (multi-modal) between the A127 and Shoeburyness that would by-pass some of the most constrained and congested junctions in the borough. In the longer term this would help to improve air quality and therefore the health and wellbeing as well as safety of existing communities in those areas.

For **climate change**, mitigation and adaptation are relevant considerations. With regards to climate change adaptation, a key consideration is flood risk. None of the options propose to deliver significant growth in an area currently at high risk from fluvial or coastal flooding. There are areas of high surface water flood risk throughout Southend; however, this is unlikely to present a significant barrier to development under any option or significantly increase flooding elsewhere if appropriate mitigation measures are delivered alongside new development proposals, such as permeable surfaces and the incorporation of sustainable drainage systems. Climate change predictions suggest that even under low emission scenarios that there will be a rise in sea level and increased risk of flooding. This is clearly a significant issue for any development within Southend and the increased risk from flooding from the sea will need to be taken into account through any development.

In respect of mitigation, a primary consideration is the need to minimise per capita emissions from transport by minimising the need to travel and supporting a modal shift away from car dependency, i.e. by supporting a shift to 'sustainable' modes of transport (walking, cycling, public transport, electric vehicles). In this context, the regeneration of brownfield land within the urban area proposed under Options A and B is likely to support modal shift early in the plan period through the delivery of new homes within walking distance or public transport to the excellent range of services, facilities and employment on offer within Southend. Options C and D will deliver growth away from the existing services/ facilities/ employment but are also likely to contribute significantly more funding for the delivery of new infrastructure and provide opportunities for comprehensive new transport and access routes. However, this is more likely to be delivered through Option D given the larger scale of growth compared to Option C and is uncertain at this stage. Another consideration is the need to support delivery of low carbon infrastructure (e.g. a ground source heat network; or solar PV with battery storage) and/or high standards of sustainable design and construction, such that the development can achieve net zero or, at least, CO2 emissions standards that exceed the requirements of Building Regulations. While it is recognised that there are barriers to this, the delivery of large-scale new neighbourhoods under Option C, and in particular Option D, present more opportunities for the delivery of low carbon infrastructure through economies of scale.

