



North Essex Authorities Strategic Section One for Local Plans: Draft Publication (Regulation 19)

Draft Sustainability Appraisal (SA): Environmental Report - June 2017



Essex County Council



Contents

1.	Introduction	1
1.1	Background	1
1.2	Strategic Section One for Local Plans	1
1.3	Local Plan Progress of the Relevant Authorities	2
2.	Sustainability Appraisal / Strategic Environmental Assessment	8
2.1	The Requirement for Sustainability Appraisal	8
2.2	The Sustainability Appraisal Process	9
2.3	The Aim and Structure of this Report	10
2.4	Quality Assurance Checklist	11
3.	Sustainability Context, Baseline and Objectives	18
3.1	Introduction	18
3.2	Plans and Programmes (Stage A1)	18
3.3	Baseline Information (Stage A2)	26
3.4	Key Sustainability Issues and Problems and Sustainability Objectives (Stage A3)	38
4.	The Approach to Assessing Section One	49
4.1	Introduction	49
4.2	An Overview of the Three Authorities Local Plan SA Sustainability Objectives	50
4.3	Developing a Common Sustainability Framework for Assessing Options: Policy Content	52
4.4	The Appraisal of Policy Content	58
4.5	Developing a Common Framework for Assessing Options: Garden Communities	60
5.	The Appraisal of the Section One Policies including Reasonable Alternatives	67
5.1	Introduction	67
5.2	Vision for the Strategic Area	68
5.3	Strategic Objectives	71
5.4	Policy SP1 – Presumption in Favour of Sustainable Development	74
5.5	Policy SP2 – Spatial Strategy for North Essex	76
5.6	Policy SP3 – Meeting Housing Needs	85
5.7	Policy SP4 – Providing for Employment and Retail	90
5.8	Policy SP5 – Infrastructure and Connectivity	95
5.9	Policy SP6 – Place Shaping Principles	98
5.10	Policy SP7 – Development and Delivery of New Garden Communities in Essex	100
5.11	Policy SP8 – Tendring / Colchester Borders Garden Community	104

5.12	Policy SP9 – Colchester / Braintree Borders Garden Community	112
5.13	Policy SP10 – West of Braintree Garden Community	119
6.	Cumulative and Synergistic Impacts of Section One Policies	127
6.1	Cumulative and Synergistic Impacts of Policies SP1-SP7	127
6.2	Cumulative and Synergistic Impacts of Policies SP8-SP10	142
7.	Conclusions and Recommendations	146
7.1	Key Points from the Assessment of Policies SP1-SP10	146
7.2	The Sustainability of Section One as a Whole	149
7.3	Key Points from the Assessment of the Garden Community (GC) Options (in Appendix 1)	156
7.4	Key Points from the Cumulative Assessment of the Allocated Garden Communities	158
7.5	Recommendations, including those taken on board throughout the SA process	161
8.	Next Steps & Monitoring	164
8.1	Consultation	164
8.2	Adoption Statement	165
8.3	Monitoring	165
	Appendix1: Appraisal of the Garden Community Options and Alternative Permutations	169
	Why Garden Communities?	169
	The Identification of Reasonable Garden Community Options	185
	The Appraisal of Reasonable Garden Community (GC) Options – Creating a Level Playing Field	190
	Cumulative & Synergistic Impacts of the Allocated Garden Communities	221
	The Assessment of Alternative (Cumulative) Garden Community (GC) Option Permutations	226

List of Tables

Table 1:	Quality Assurance Checklist.....	11
Table 2:	Key Documents	18
Table 3:	Key Sustainability Issues and Problems	38
Table 4:	Sustainability Objectives for the Three Authorities Local Plan SAs	50
Table 5:	Sustainability Framework for Assessing Policy Content	52
Table 6:	Impact on Sustainability Objectives.....	58
Table 7:	Framework for Assessing Garden Community Options	61
Table 8:	Impact on Sustainability Objectives: Vision for the Strategic Area.....	69
Table 9:	Impact on Sustainability Objectives: Strategic Objectives.....	72
Table 10:	Impact on Sustainability Objectives: Policy SP1	75
Table 11:	Impact on Sustainability Objectives: Policy SP2	78
Table 12:	Impact on Sustainability Objectives: Policy SP3	86
Table 13:	Impact on Sustainability Objectives: Policy SP4	92
Table 14:	Impact on Sustainability Objectives: Policy SP5	97
Table 15:	Impact on Sustainability Objectives: Policy SP6	99
Table 16:	Impact on Sustainability Objectives: Policy SP7	103
Table 17:	Impact on Sustainability Objectives: Policy SP8	108
Table 18:	Impact on Sustainability Objectives: Policy SP9	116
Table 19:	Impact on Sustainability Objectives: Policy SP10	123
Table 20:	Cumulative and Synergistic Impacts of Policies SP8-SP10.....	142
Table 21:	Summary of Long Term Impacts of Policies SP1-SP7	146
Table 22:	Overall Impacts of Section One.....	149
Table 23:	Summary of Impacts of the Reasonable Garden Community (GC) Options.....	157
Table 24:	Monitoring Measures	165
Table 25:	'Garden Communities', 'New Towns' or 'Traditional Approaches' to Strategic Scale Growth ..	172
Table 26:	The Garden Community Options.....	185
Table 27:	Impact on Sustainability Objectives: The Garden Community Options (Allocations & Alternatives)	193
Table 28:	The Performance of the Allocated Garden Community (GC) Options	221
Table 29:	The Cumulative & Synergistic Impacts of the Allocated Garden Community (GC) Options	221
Table 30:	The Reasons for Rejecting the Alternative Garden Community (GC) Option Permutations	241



Glossary of Acronyms

AA	Appropriate Assessment
ALC	Agricultural Land Classification
AONB	Area of Outstanding Natural Beauty
AQMA	Air Quality Management Area
BDC	Braintree District Council
CA	Conservation Area
CAUSE	Campaign Against Urban Sprawl in Essex
CBC	Colchester Borough Council
CCC	Chelmsford City Council
CO ₂	Carbon Dioxide
DCLG	Department for Communities and Local Government
DECC	Department of Energy and Climate Change
DEFRA	Department for Environment, Food and Rural Affairs
DfT	Department for Transport
DPD	Development Plan Document
EA	Environment Agency
EC	European Commission
ECC	Essex County Council
EEFM	East of England Forecasting Model
EHEN	Essex Historic Environment Record
EU	European Union
GC	Garden Community
GCP	Garden City Principle
GTAA	Gypsy & Traveller Accommodation Assessment
Ha	Hectare
HE	Historic England
HMA	Housing Market Area
HRA	Habitats Regulations Assessment
I&O	Issues and Options
IWMP	Integrated Water Management Plan
JNCC	Joint Nature Conservation Committee
KS4	Key Stage 4
LB	Listed Building
LCA	Landscape Character Assessment
LEP	Local Enterprise Partnership
LPA	Local Planning Authority

LNP	Local Nature Partnership
MSA	Minerals Safeguarding Area
NE	Natural England
NEGC	North Essex Garden Communities
NHS	National Health Service
NPPF	National Planning Policy Framework
NVQ	National Vocational Qualification
OAN	Objectively Assessed Need
ONS	Office of National Statistics
PDL	Previously Developed Land
PO	Preferred Options
PPG	Planning Practice Guidance
PRoW	Public Right of Way
SA	Sustainability Appraisal
SAC	Special Area of Conservation
SEA	Strategic Environmental Assessment
SELEP	South East Local Enterprise Partnership
SFRA	Strategic Flood Risk Assessment
SHLAA	Strategic Housing Land Availability Assessment
SHELA	Strategic Housing and Employment Land Availability
SLAA	Strategic Land Availability Assessment
SHMA	Strategic Housing Market Assessment
SM	Scheduled Monument
SNPP	Sub National Population Projections
SO	Sustainability Objective
SPA	Special Protection Area
SPD	Supplementary Planning Document
SPG	Supplementary Planning Guidance
Sqm	Square Metre
SSSI	Site of Specific Scientific Interest
STW/WRC	Sewage Treatment Works / Water Recycling Centres
SuDS	Sustainable Drainage System
TCPA	Town and Country Planning Association
TDC	Tendring District Council
UDC	Uttlesford District Council
UK	United Kingdom
UPC	Unattributed Population Change
WCS	Water Cycle Study
WPA	Waste Planning Authority

1. Introduction

1.1 Background

Braintree District Council, Colchester Borough Council and Tendring District Council, together forming the 'North Essex Authorities,' in conjunction with Essex County Council as a key partner in its strategic role for infrastructure and service provision, commissioned Place Services of Essex County Council to undertake an independent Sustainability Appraisal (SA) for a Strategic Section One for the respective Council's Local Plans.

Place Services are acting as consultants for this work; therefore the content of this SA should not be interpreted or otherwise represented as the formal view of Essex County Council.

1.2 Strategic Section One for Local Plans

In Essex, as elsewhere, the influences of population and economic growth do not stop at administrative boundaries. Settlement patterns, migration flows, commuting and strategic infrastructure needs all have significant influences within and between local authority areas.

Local Plans are the main vehicle for conveying an area's growth requirements and how these will be accommodated. However, individual local authority boundaries cannot encapsulate the geographies of issues that transcend those boundaries. Through active and on-going collaboration the authorities can jointly plan, manage and review strategic objectives and requirements for the effective implementation of sustainable development (including minerals and waste) and enhanced environments.

The geographic and functional relationship between the authorities' areas is demonstrated by the fact that, with Chelmsford City Council, they form a single Housing Market Area (HMA) for planning purposes; and they are a major part of the Haven Gateway, an established economic partnership. Within this context, the forecast levels of future population growth together with the geography of North Essex means that considerations for future growth will include options that have clear cross-boundary implications. These include both the expansion of existing towns and villages as well as possible new settlements.

Consequently, Braintree, Colchester and Tendring have agreed to come together because of their shared desire to promote a sustainable growth strategy for the longer term; and the particular need to articulate the strategic priorities within the wider area and how these will be addressed. Central to this is the effective delivery of planned strategic growth, particularly housing and employment development, with the necessary supporting infrastructure.

The Strategic Section One for Local Plans is intended to form part of each of the authorities' separate Local Plans, with the main purpose of covering the strategic Local Plan requirements of:

- Articulating a spatial portrait of the area, including its main settlements and strategic infrastructure, as a framework for accommodating future planned growth;
- Providing a strategic vision for how planned growth in north Essex will be realised, setting strategic objectives and policies for key growth topics;
- Setting out the numbers of additional homes and jobs across the area that will be needed

covering the plan period to 2033; and

- Highlighting the key strategic growth locations across the area and the necessary new or upgraded infrastructure to support this growth.

1.3 Local Plan Progress of the Relevant Authorities

1.3.1 Braintree District Council Local Plan

The Council consulted on a Local Plan Issues and Scoping Report in January – March 2015. Relevant to the scope of the Strategic Section One for Local Plans, the Local Plan Issues and Scoping Report highlighted the following key issues:

- Large numbers of new homes are required in the District to support the growing population;
- The District may not have enough brownfield sites (those where buildings have previously been located) to accommodate the new homes that need to be provided; and
- The Council must balance new homes with protection of the natural and historic environment.

This document highlighted the need to demonstrate that the new Plan can achieve and maintain a supply of readily available development sites for new homes, meeting a much higher target than in the past. Regarding this, and in response to the above key issues, it looked at a number of options, including:

- Focusing new homes in the existing towns and larger villages;
- Building new homes in one or more new villages;
- Dispersing new homes between all areas of the District;
- Building new homes in areas where they can provide funding for major infrastructure projects such as new roads; and
- Building new homes on the existing public transport/rail network to encourage sustainable travel.

Braintree District Council undertook an 8 week public consultation on a Draft Local Plan (Preferred Options stage) in June 2016. The Plan included numerous policy approaches and non-strategic (in the context of this Section One) site allocations to meet the following plan objectives:

- Creating a successful economy
 - To promote a local economy which supports the growth of existing businesses and encourages new entrepreneurial enterprises and employers to locate in the District, by providing high-quality land and buildings in sustainable locations, to meet the needs of businesses, and seeks to reduce travel outside the District to work.
- Retail and Town Centres
 - To support the changing role of town centres as a location for retail, employment, community services and cultural facilities by encouraging new development and regeneration schemes to support the function of the towns as major service centres. The major regional shopping destination of Braintree Freeport and Retail Park continues to be supported. Shops and retail facilities will also be provided on new developments where appropriate.

- **Housing Need**
 - To provide a range of housing sizes, types and tenures which meet local need, including affordable homes, starter homes, and those residents with specialist accommodation needs. New homes will be created in balanced sustainable communities.
- **Transport Infrastructure**
 - New developments must contribute towards the improvement of the road network in the District, including schemes to ensure safety and aid congestion. Developments will make appropriate provision for public transport, walking and cycling, both within developments and connections to the wider network.
- **Broadband**
 - To work with Essex County Council and service providers, to secure the earliest availability of universal broadband coverage and the fastest available connections speeds in the District and to ensure that these are made available to all new developments, where it is viable to do so.
- **Education and Skills**
 - To facilitate the best possible education system for District residents of all ages, by supporting the construction of new schools and other educational buildings which support life-long learning and skills development in the District and which provides the skills necessary for businesses in the District to thrive.
- **Protection of the Environment**
 - To protect and enhance the natural and historic environment and varied landscape character of the District, promoting local distinctiveness and character. The Council will seek to minimise the impact of all forms of pollution on the health and amenity of local communities and the natural and built environment.
- **Good Quality Design**
 - All new developments in the District will be of high-quality design, easily maintainable and will respect the scale, style and setting of the site with reference to historic townscapes, natural landscapes and existing infrastructure. Development would use materials which respect and enhance their setting and contribute to local character.
- **Healthy Communities**
 - All residents of the District are able to keep active and make healthy choices by ensuring outdoor community areas are preserved and enhanced and appropriate new areas to enable sports and recreation are created. Cycle ways and pedestrian links are also to be provided in all new developments to encourage walking and cycling. Land will be made available to support the expansion of local physical and mental health facilities.
- **Social Infrastructure**
 - Residents of the District should have access to the best local and community facilities which provide inclusive places for communities to meet, play and learn. New developments will make contributions to existing facilities or provide land and contributions for new facilities.

- Sustainability
 - To ensure that all development takes place in the most well-connected areas, making the best use of sites that have been previously developed. The use of natural resources should be minimised and developments should encourage the use of renewable energy and energy efficiency measures.
- Empowering Local People
 - Creating a planning environment in which local residents and businesses feel fully involved and empowered to engage in shaping the future of the District. Documents are written in a way which is accessible and decisions are taken in a transparent way.

1.3.2 Colchester Borough Council

The Council consulted on an Issues and Options Local Plan in early 2015. This document included key issues regarding:

- Development of realistic housing targets for both market and affordable housing.
- Allocation of new housing sites in the most sustainable locations.
- Integrating new housing into the community by getting the right densities and character appropriate to the Borough's diverse neighbourhoods ranging from the Town Centre.
- Building housing of different types and sizes to cater for the full range of ages and needs, with particular regard to the needs of specific groups including students, families, people with disabilities, ethnic minorities such as gypsies and travellers, and older residents.
- Addressing the issue of supporting people who want to build their own homes.
- Achieving high quality sustainable housing design with policies that strike a balance between ensuring quality through standards and supporting innovation through a flexible approach.
- Seeking to ensure, in addressing all of the issues above, that the end result is the creation of high quality, sustainable places.
- Ensuring the delivery of well-located sites to support employment with particular regard to growing sectors of the economy.
- Development of policies to support new investment and help existing businesses overcome barriers to success and to help train new workers.
- Ensuring there is sufficient land across the plan period to support housing growth
- Development of a retail hierarchy which safeguards the pre-eminence of the Town Centre while supporting appropriate levels of growth in other areas.
- Review of existing Town Centre boundary, primary shopping area and primary shopping frontages.
- Development of policies for the Town Centre that help to create a balanced mix of activities in the daytime, evening and night time.
- Development of policies which support tourism, leisure, culture and the arts.

The responses to this consultation were collated and analysed. The Council has been collecting evidence

and commissioning studies which has informed the new Local Plan's evidence base. For example evidence has been gathered through a 'Call for Sites' exercise whereby the Council invited proposals for new uses of land in the Borough for potential inclusion in the new Local Plan. In addition these sites have been assessed thoroughly in a Strategic Land Availability Assessment, which explored the suitability, availability and achievability of all land use proposals proposed in the Borough.

The Council undertook a consultation on a Draft Local Plan, outlining the Council's preferred options for growth in the Borough in July 2016. The Plan included numerous policy approaches and non-strategic (in the context of this Section One) site allocations to meet the following plan objectives:

- Sustainable Growth
 - Ensure new development is sustainable and minimises the use of scarce natural resources and addresses the causes and potential impacts of climate change, and encourages renewable energy.
 - Focus new development at sustainable locations to create new communities with distinctive identities whilst supporting existing communities, local businesses, and sustainable transport.
 - Provide high quality housing of all tenures at accessible locations to accommodate our growing community.
 - Ensure there are sufficient sites allocated in the right locations to support employment growth over the plan period.
 - Focus development at accessible locations which support public transport, walking and cycling, and reduce the need to travel.
 - Secure infrastructure to support new development.
 - Promote of healthy lifestyles through the provision and enhancement of sport and recreation facilities, public open space and green infrastructure.
- Natural Environment
 - Protect the countryside and coast
 - Develop a green infrastructure network across the borough
 - Ensure new development avoids areas of flood risk and reduce future flood risk where possible.
 - Protect and enhance landscapes, biodiversity, green spaces, air and water quality, and river corridors.
- Places
 - Ensure the unique qualities of different communities and environments in the Borough are identified, protected and enhanced through policies and allocations which ensure high quality, consistency, equity and responsiveness to local character.
 - Promote high quality design and sustain Colchester's historic character, found in its buildings, townscape and archaeology.
 - Improve streetscapes, open spaces and green links to provide attractive and accessible spaces for residents to live, work and play.

1.3.3 Tendring District Council

Tendring District Council consulted on an Issues and Options Local Plan in 2015. Representing the first stage in the plan-making process, this involved the LPA exploring 'issues and options' across the District in order to develop spatial strategy selection and scenarios surrounding growth. The key issues emanating from and included within the Issues and Options covered needs to:

- Plan for the right number of new homes, of the right size, type and tenure to be built and in the right locations for current and future generations
- Meet the challenges presented by a lack of brownfield land
- Build homes to boost the economy by building more homes and increasing the population in the right locations to boost the demand for goods and services, unlock land for businesses and deliver new infrastructure
- Support growth locations and prioritising economic development projects
- Target growth sectors and promote sectors of the economy with greatest potential for significant growth in the future
- Improve knowledge and skills through working with businesses, schools and colleges to provide the training and work experience the residents need to address shortages in skills
- Support existing businesses through working closely with existing businesses, supporting them to expand and diversify

The development of 'issues and options', and their subsequent SA, ensured that the LPA is making every effort to meet housing needs. The Issues and Options Local Plan 2015 looked at broad locations for growth.

In addition, a number of additional growth options or scenarios were developed alongside additional options for the distribution of growth in different areas of the District as can be considered reasonable. These are in consideration of available land as put forward for allocation in a call-for-sites exercise that ran concurrently with the Issues and Options consultation. A range of evidence base documents have been commissioned to inform the development of the Local Plan, including a Strategic Housing and Employment Land Availability study.

The District Council provided the public with a chance to make representations on a Preferred Options Local Plan in July 2016 through best practice in plan-making. This Preferred Options Local Plan included numerous policy approaches and non-strategic (in the context of this Section One) site allocations to meet the following plan objectives:

- Housing Delivery
 - To provide new dwellings within Tendring District up to 2033 of sufficient variety in terms of sites, size, types, tenure and affordability to meet the needs of a growing and ageing population; and
 - To deliver high quality sustainable new communities.
- Employment/Commercial
 - To provide for the development of employment land on a variety of sites to support a diversity of employment opportunities and to achieve a better balance between the location of jobs and housing, which will reduce the need to travel and promote

sustainable growth up to the period of 2033.

- Retail Development
 - To promote the vitality and viability of the town centres, exploiting the benefit of enhanced growth of the town whilst retaining the best and valued aspects of its existing character.
- Infrastructure Provision
 - To make efficient use of existing transport infrastructure and ensure sustainable transport opportunities are promoted in all new development. Where additional capacity is required in the form of new or upgraded transport infrastructure, to ensure this is provided alongside new development.
 - To enable provision of upgraded broadband infrastructure and services.
 - To ensure that new growth brings opportunities to enhance existing services, facilities and infrastructure for the benefit of existing and new communities.
- Education and Healthcare Needs
 - To improve and provide good quality educational opportunities and prospects for Tendring's residents as part of sustainable community strategy. This includes practical vocational training and apprenticeships.
 - To work with partners in the National Health Service, local health organisations and local community groups to ensure adequate provision of healthcare facilities to support growing communities.
- Sustainability
 - To locate development within Tendring District where it will provide the opportunity for people to satisfy their day-to-day needs for employment, shopping, education, and other services locally or in locations which minimise the need to travel and where there are modes of transport available in addition to the use of car.
- Cultural Heritage
 - To conserve and enhance Tendring District's heritage, respecting historic buildings and their settings, links and views.
- Biodiversity
 - To provide a network of multi-functional green spaces which secures a net gain in biodiversity, provides for the sporting and recreational needs of the population, promotes healthy lifestyles and enhances the quality of the natural and built environment.
- Water and Climate Change
 - To reduce the risk of flooding by securing the appropriate location and design of new development, having regard to the likely impact of climate change.
- Tourism Promotion
 - To work with partners to provide an enhanced environment for tourism and the maritime sector and its associated services.

2. Sustainability Appraisal / Strategic Environmental Assessment

2.1 The Requirement for Sustainability Appraisal

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

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

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

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

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

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

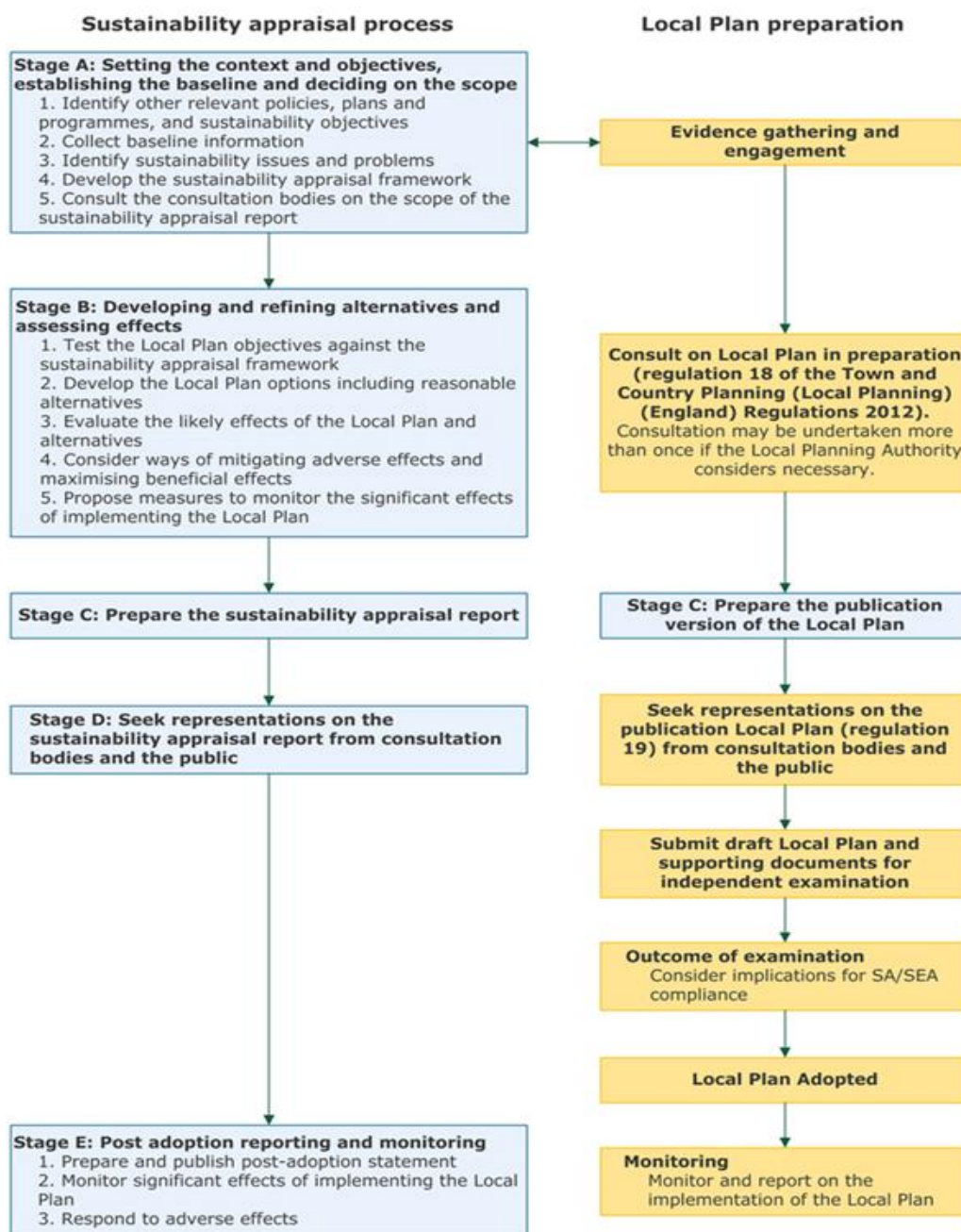
This includes Local Plans. The aim of the SEA is to identify potentially significant environmental effects created as a result of the implementation of the plan or programme on issues such as *‘biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationship between the above factors’* as specified in Annex 1(f) of the Directive. SA examines the effects of proposed plans and programmes in a wider context, taking into account economic, social and environmental considerations in order to promote sustainable development. It is mandatory for Local Plans to undergo a Sustainability Appraisal in accordance with the Planning and Compulsory Purchase Act 2004 as amended by the Planning Act 2008, and in accordance with paragraph 165 of the NPPF.

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

2.2 The Sustainability Appraisal Process

The SA of the Common Strategic Section One for Local Plans follows that of the Sustainability Appraisal process as iterated in National Planning Practice Guidance on Sustainability Appraisal requirements for local plans. The following 5 sequential stages are documented below.

Figure 1: Stages in the Sustainability Appraisal Process and Local Plan Preparation



Source: Planning Practice Guidance – Sustainability appraisal requirements for local plans (Paragraph: 013 Reference ID: 11-013-20140306 Revision date: 06 03 2014)

2.3 The Aim and Structure of this Report

This report responds to Stage C in the SA process above; including those requirements of Stage B: assessing strategic options including reasonable alternatives, evaluating the likely effects of the strategic options and alternatives, and considering ways of mitigating adverse effects and maximising beneficial effects.

The production of a Sustainability Appraisal (Environmental) Report is a statutory requirement at this stage, and this SA Report has been produced to accompany the Draft Publication Local Plan consultations for Braintree District Council's Local Plan, Colchester Borough Council's Local Plan and Tendring District Council's Local Plan.

This report is accompanied by a number of Annexes. These respond to:

- Annex A – Plans and Programmes
- Annex B – Baseline Information
- Annex C – History of Alternatives and Consultation Comments

Following the finalisation of this Report, Stage D in the above SA process requires consultation. There are three statutory consultees or 'environmental authorities' that are required to be consulted for all Sustainability Appraisal and Strategic Environmental Assessment documents. These are:

- The Environment Agency;
- Natural England; and
- Historic England.

In addition to these, consultation will seek to engage the wider community in order to encompass comprehensive public engagement. The North Essex Authorities may additionally wish to invite comments from focussed groups, relevant stakeholders and interested parties. The detailed arrangements for consultation are to be determined by the North Essex Authorities.

The environmental authorities and public are to be given 'an early and effective opportunity' within appropriate time-frames to express their opinion. This includes the specific notification of the consultation documents and timeframes to those persons or bodies on the 'consultation databases' of the three LPAs. This reflects those persons or bodies who have commented on the SA in previous consultation stages.

2.4 Quality Assurance Checklist

The Quality Assurance Checklist shows where in this Environment Report the requirements as set out in the SEA Directive (annex 1) and the Quality Assurance checklist (figure 25) from the Department of Communities and Local Government document: A Practical Guide to the Strategic Environmental Assessment Directive (2006) are covered. It shows that this SA of Section One for Local Plans complies with legislation and best practice.

Table 1: Quality Assurance Checklist

SEA Directive Requirements	Where covered in this SA Environmental Report...
General	
a) an outline of the contents, main objectives of the plan, and relationship with other relevant plans and programmes;	Section 1 and Annex A.
b) the relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan;	Section 3 and Annex B.
c) the environmental characteristics of areas likely to be significantly affected;	Section 3 and Annex B.
d) any existing environmental problems which are relevant to the plan including, in particular, those relating to any areas of a particular environmental importance, such as areas designated pursuant to Directives 79/409/EEC and 92/43/EEC;	Section 3 and Annex B.
e) the environmental protection objectives, established at international, Community or national level, which are relevant to the plan and the way those objectives and any environmental considerations have been taken into account during its preparation;	Section 3 and Annex A.
f) the likely significant effects on the environment, including on issues such as biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape	Sections 5, 6, 7 and Appendix 1.

SEA Directive Requirements	Where covered in this SA Environmental Report...
and the interrelationship between the above factors (these effects should include secondary, cumulative, synergistic, short, medium and long-term, permanent and temporary, positive and negative impacts);	
g) the measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment of implementing the plan;	Sections 5, 6 and Appendix 1 (within relevant sub-sections entitled 'Proposed Mitigation Measures / Recommendations') and Section 7.
h) an outline of the reasons for selecting the alternatives dealt with, and a description of how the assessment was undertaken including any difficulties (such as technical deficiencies or lack of know-how) encountered in compiling the required information;	Sections 5, 6 and Appendix 1 (within relevant sub-sections entitled 'Alternatives Considered').
i) a description of the measures envisaged concerning monitoring;	Section 4.
j) a non-technical summary of the information provided under the above headings.	A separate Non-Technical Summary has been provided.

Objectives and context

The plan/strategy's purpose and objectives are made clear.	Section 1 and Sections 5, 6 and Appendix 1.
Environmental issues and constraints, including international and EC environmental protection objectives, are considered in developing objectives and targets.	Section 3 and Annex B and Section 4.
SEA objectives, where used, are clearly set out and linked to indicators and targets as appropriate.	Sections 5, 6 and Appendix 1.
Links with other related plans, programmes and policies are identified and explained.	Section 3 and Annex A.
Conflicts that exist between SEA objectives, between SEA and plan objectives and between SEA objectives and other plan objectives are identified	Sections 5, 6 and Appendix 1 where relevant.

SEA Directive Requirements	Where covered in this SA Environmental Report...
and described.	
Consultation Bodies are consulted in appropriate ways and at appropriate times on the content and scope of the Environmental Report.	Consultation has been undertaken alongside the Plan at all relevant statutory stages.
The assessment focuses on significant issues.	Sections 5, 6 and Appendix 1 (within relevant sub-sections entitled 'Significant and Temporal Effects').
Technical, procedural and other difficulties encountered are discussed; assumptions and uncertainties are made explicit.	Sections 5, 6 and Appendix 1 where relevant.
Reasons are given for eliminating issues from further consideration.	Sections 5, 6 and Appendix 1 (within relevant sub-sections entitled 'Alternatives Considered').
Realistic options are considered for key issues, and the reasons for choosing them are documented.	Sections 5, 6 and Appendix 1 (within relevant sub-sections entitled 'Alternatives Considered').
Alternatives include 'do minimum' and/or 'business as usual' scenarios wherever relevant.	Sections 5, 6 and Appendix 1 (within relevant sub-sections entitled 'Alternatives Considered' where relevant).
The environmental effects (both adverse and beneficial) of each alternative are identified and compared.	Sections 5, 6 and Appendix 1 (within relevant sub-sections entitled 'Alternatives Considered').
Inconsistencies between the alternatives and other relevant plans, programmes or policies are identified and explained.	Sections 5, 6 and Appendix 1 where relevant.

Baseline information

Relevant aspects of the current state of the plan area (including social and economic characteristics) and their likely evolution without the plan are described.	Section 3 and Annex B.
Environmental characteristics of areas likely to be significantly affected are described, including areas wider than the physical boundary of the plan area where it is likely to be affected by the plan.	Section 3 and Annex B.

SEA Directive Requirements	Where covered in this SA Environmental Report...
Difficulties such as deficiencies in data or methods are explained.	Section 3 and Annex B.

Prediction and evaluation of likely significant environmental effects

Effects identified include wider sustainability issues (employment, housing, transport, community cohesion, education etc) in addition to the types listed in Annex 1(f) of the SEA Directive (biodiversity, population, human health, fauna, flora, soil, water, air, climate factors, material assets, cultural heritage and landscape).	Sections 5, 6 and Appendix 1 (within relevant sub-sections entitled 'Significant and Temporal Effects' and 'Secondary Effects').
Both positive and negative effects are considered, and the duration of effects (short, medium or long-term) is addressed.	Sections 5, 6 and Appendix 1 (within relevant sub-sections entitled 'Significant and Temporal Effects').
Likely secondary, cumulative and synergistic effects are identified where practicable.	Sections 5, 6 and Appendix 1 (within relevant sub-sections entitled 'Significant and Temporal Effects' and 'Secondary Effects'). Sections include assessment of cumulative and synergistic impacts.
Inter-relationships between effects are considered where practicable.	Sections 5, 6 and Appendix 1 (within relevant sub-sections entitled 'Significant and Temporal Effects' and 'Secondary Effects'). Sections include assessment of cumulative and synergistic impacts.
The prediction and evaluation of effects makes use of relevant accepted standards, regulations, and thresholds.	Sections 5, 6 and Appendix 1 (within relevant sub-sections entitled 'Significant and Temporal Effects' and 'Secondary Effects'). Sections include assessment of cumulative and synergistic impacts and draw on the Section One's specific evidence base and baseline information.

Mitigation measures

Measures envisaged to prevent, reduce and offset any significant adverse effects of implementing the plan are indicated.	Sections 5, 6 and Appendix 1 (within relevant sub-sections entitled 'Proposed Mitigation Measures / Recommendations') and Section 8.
Issues to be taken into account in project consents are identified	Sections 5, 6 and Appendix 1 (within relevant sub-sections entitled 'Proposed Mitigation Measures /

SEA Directive Requirements	Where covered in this SA Environmental Report...
	Recommendations') and Section 7 where relevant.

The Environmental Report

Is clear and concise in its layout and presentation	The SA is clear and concise, with a separate non-technical summary.
Uses simple, clear language and avoids or explains technical terms	The SA uses simple, clear language and avoids or explains technical terms, with a separate non-technical summary.
Uses maps and other illustrations where appropriate	The SA uses tables and the use of colour coding / symbols to help identify and illustrate impacts.
Explains the methodology used	Section 4.
Explains who was consulted and what methods of consultation were used	Consultation has been and will be undertaken alongside the Plan at all relevant statutory stages. The environmental authorities and public are to be given 'an early and effective opportunity' within appropriate time-frames to express their opinion. This includes the specific notification of the consultation documents and timeframes to those persons or bodies on the 'consultation databases' of the three LPAs. This reflects those persons or bodies who have commented on the SA in previous consultation stages.
Identifies sources of information, including expert judgement and matters of opinion	Sections 5, 6 and Appendix 1.
Contains a non-technical summary covering the overall approach to the SEA, the objectives of the plan, the main options considered, and any changes to the plan resulting from the SEA.	A separate Non-Technical Summary has been provided.

Consultation

The SEA is consulted on as an integral part of the plan-making process.	Consultation has been and will be undertaken alongside the Plan at all relevant statutory stages.
---	---

SEA Directive Requirements	Where covered in this SA Environmental Report...
Consultation Bodies and the public likely to be affected by, or having an interest in, the plan or programme are consulted in ways and at times which give them an early and effective opportunity within appropriate time frames to express their opinions on the draft plan and Environmental Report.	Consultation has been and will be undertaken alongside the Plan at all relevant statutory stages. The SA will be made available for comment in accordance with the consultation procedures of the three LPAs. This includes the specific notification of the consultation documents and timeframes to those persons or bodies on the 'consultation databases' of the three LPAs. This reflects those persons or bodies who have commented on the SA in previous consultation stages.

Decision-making and information on the decision

The environmental report and the opinions of those consulted are taken into account in finalising and adopting the plan or programme.	Consultation comments have been considered throughout the plan-making and SA processes, including those that identify new options for consideration. These have been factored into the SA for appraisal where relevant.
An explanation is given of how they have been taken into account.	Annex C details responses and actions to individual consultation comments received to date.
Reasons are given for choosing the plan as adopted, in the light of other reasonable options considered.	Sections 5, 6 and Appendix 1 (within relevant sub-sections entitled 'Alternatives Considered').

Monitoring measures

Measures proposed for monitoring are clear, practicable and linked to the indicators and objectives used in the SEA.	Section 8 outlines the approach to monitoring, which will be undertaken as part of the Council's existing monitoring arrangements. An Adoption Statement will include more detailed monitoring arrangements once the Plan is adopted.
Monitoring is used, where appropriate, during implementation of the plan or programme to make good deficiencies in baseline information in the SEA.	Section 8 outlines the approach to monitoring, which will be undertaken as part of the Council's existing monitoring arrangements. An Adoption Statement will include more detailed monitoring arrangements once Plans are adopted.
Monitoring enables unforeseen adverse effects to be identified at an early stage. (These effects may	To be addressed in an Adoption Statement once Plans are adopted.

SEA Directive Requirements	Where covered in this SA Environmental Report...
include predictions which prove to be incorrect.)	
Proposals are made for action in response to significant adverse effects.	To be addressed in an Adoption Statement once Plans are adopted.

3. Sustainability Context, Baseline and Objectives

3.1 Introduction

The following section outlines the key findings of the three authorities' Local Plan Scoping Reports which includes an outline of the plans and programmes, the baseline information profile for the area.

3.2 Plans and Programmes (Stage A1)

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

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

Table 2: Key Documents

International Plans and Programmes
European Commission (EC) (2011) A Resource-Efficient Europe – Flagship Initiative Under the Europe 2020 Strategy, Communication from the Commission to the European Parliament, the Council, The European Economic and Social Committee of the Regions.
European Landscape Convention (Florence, 2002)
European Union Water Framework Directive 2000
European Union Nitrates Directive 1991
European Union Noise Directive 2002
European Union Floods Directive 2007

European Union Air Quality Directive 2008 (2008/50/EC) and previous directives (96/62/EC; 99/30/EC; 2000/69/EC & 2002/3/EC)

European Union Directive on the Conservation of Wild Birds 2009

European Union Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora 1992

European Community Biodiversity Strategy to 2020

United Nations Kyoto Protocol

World Commission on Environment and Development 'Our Common Future' 1987

The World Summit on Sustainable Development Johannesburg Summit 2002

Environmental Assessment of Plans and Programmes Regulations 2004 (the SEA Regulations).

The Conservation of Habitats and Species Regulations, 2010

Review of the European Sustainable Development Strategy (2009)

Environment 2010: Our Future, Our Choice (2003)

SEA Directive 2001

The Industrial Emissions Directive 2010

Energy Performance of Buildings Directive 2010 on the energy performance of buildings 2010/31/EU

The Drinking Water Directive 1998

The Packaging and Packaging Waste Directive 1994

EU Seventh Environmental Action Plan (2002-2012)

European Spatial Development Perspective (1999)

European Convention on the Protection of the Archaeological Heritage (Valletta, 1992)

Aarhus Convention (1998)

National Plans and Programmes

National Planning Practice Guidance (2016)

The Localism Act 2011
National Planning Policy Framework (March 2012)
The Housing White Paper (February 2017)
The Future of Transport White Paper 2004
Housing Act (2004)
Building a Greener Future: Policy Statement (July 2007)
Community Infrastructure Levy Guidance (April 2013)
Underground, Under Threat - Groundwater protection: policy and practice (GP3)
Model Procedures for the Management of Land Contamination – Contaminated Land Report 11 (September 2004)
Natural Environment and Rural Communities Act 2006
Countryside and Rights of Way Act 2000
Planning and Compulsory Purchase Act 2004
The Education (School Information) (England) (Amendments) Regulations, 2002
Childcare Act, 2006
Flood & Water Management Act 2009
The Air Quality Strategy for England, Scotland, Wales and Northern Ireland (2007)
Safeguarding Our Soils: A Strategy for England (2009)
Natural Environment White Paper: The Natural Choice: Securing the Value of Nature (2011)
The National Adaptation Programme – Making the Country Resilient to a Changing Climate (2013)
Planning Policy for Traveller Sites (2012)
National Planning Policy for Waste (2014)
Adapting to Climate Change: Ensuring Progress in Key Sectors (2013)

DECC National Energy Policy Statement EN1 (2011)
DCLG: An Introduction to Neighbourhood Planning (2012)
JNCC/Defra UK Post-2010 Biodiversity Framework (2012)
Mainstreaming Sustainable Development (2011)
UK Marine Policy Statement, HM Government (2011)
Electricity Market Reform White Paper 2011
DfT (2013) Door to Door: A strategy for improving sustainable transport integration
DCLG (2011) Laying the Foundations: A Housing Strategy for England
DEFRA (2011) Securing the Future: Delivering UK Sustainable Development Strategy
DECC (2011) UK Renewable Energy Roadmap (updates setting out progress and changes to the strategy dated 2013 and 2013)
Community Energy Strategy (DECC, 2014)
The National Flood and Coastal Erosion Risk Management Strategy for England (Environment Agency, 2011)
Waste prevention programme for England: Prevention is better than cure – The role of waste prevention in moving to a more resource efficient economy (HM Government, 2013)
Future Water: The Government's Water Strategy for England (DEFRA, 2008)
Water for People and the Environment: Water Resources Strategy for England and Wales (Environment Agency, 2009)
Safeguarding our Soils: A Strategy for England (DEFRA, 2009)
Sub-national Plans and Programmes
Essex Gypsy and Traveller and Travelling Showpeople Accommodation Assessment – on behalf of EPOA (July 2014)
Looking Back, Moving Forward – Assessing the Housing Needs of Gypsies and Travellers in Essex (2006)
Greater Essex Demographic Forecasts Phase 7 (2015)

Essex Transport Strategy: the Local Transport Plan for Essex (2011)
2011 Essex Biodiversity Action Plan
Commissioning School Places in Essex 2015-2020
Essex County Council Joint Municipal Waste Management Strategy 2007-2032
Anglian River Basin Management Plan (2015)
Essex Wildlife Trust Living Landscape plans
Essex Wildlife Trust Living Landscape Statements
Respecting our Past, Embracing our Future: A Strategy for Rural Essex (2016)
ECC Parking Standards: Design and Good Practice (September 2009)
The Essex Local Area Agreement – ‘Health and Opportunity for the People of Essex’ 2008 – 2011 (2010 Refresh)
ECC Development Management Policies (February 2011)
The Essex Strategy 2008 – 2018
Sustainable Drainage Systems Design and Adoption Guide 2012
Essex Minerals Local Plan (2014)
Essex Replacement Waste Local Plan (submitted June 2016)
Haven Gateway: Programme of Development: A framework for Growth, 2008 – 2017 (2007)
Haven Gateway: Integrated Development Plan (2008)
South East LEP Investment and Funding (March/April 2014)
Anglian Water Business Plan (2015-2020) (2012)
Draft Water Resource Management Plan (2014-2039) (2014)
Combined Essex Catchment Abstraction Management Plan (2013)
Haven Gateway Water Cycle Study: Stage 1 and 2 Reports (2008)

South East LEP Growth Deal and Strategic Economic Plan (2004)
ECC Developer's Guide to Infrastructure Contributions (Revised Edition 2016)
Vision for Essex 2013-2017: Where Innovation Brings Prosperity (2013)
Corporate Outcomes Framework 2014-2018 Essex County Council (2014)
Colchester Draft Surface Water Management Plan (2014)
A12/A120 Route Based Strategy (2013)
Highway Authority's Development Management Policies (2011)
Economic Plan for Essex (2014)
Essex Design Guide (2005)
North Essex Catchment Flood Management Plan (2009)
Essex and South Suffolk Shoreline Management Plan (second phase) (2011)
Dedham Vale AONB and Stour Valley Management Plan 2010 – 2015
Local Plans and Programmes
Braintree District Council, Chelmsford City Council, Colchester Borough Council, Tendring District Council, Objectively Assessed Housing Need Study - Peter Brett Associates (July 2015 and updated 2016)
North Essex Concept Feasibility Study (AECOM) - July 2016
Colchester Metro Town Evaluation of Alternatives (AECOM) – April 2017
Monks Wood, Braintree Evaluation of Alternatives (AECOM) – April 2017
HRA Report for North Essex Authorities Strategic Section 1 for Local Plans (LUC) (including Appropriate Assessment) – May 2017
Braintree Local Plan Preferred Option Assessment Highways/Transport Planning -March 2017
Colchester Borough Council, Braintree District Council, Tendring District Council and Essex County Council North Essex Garden Communities Employment & Demographic Studies – February 2017
North Essex Garden Communities Movement and Access Study – March 2017

Colchester Infrastructure Delivery Plan Report - March 2017
Retail and Town Centre Uses Study Colchester Borough Council: Retail Update 2013 (2013)
Landscape Character Assessment (Chris Blandford Associates, September 2006)
Habitat Regulations Assessment Survey and Monitoring Programme, Final Report, Colchester Borough Council (December 2013)
Colchester Coastal Protection Belt Review (Chris Blandford's Associates 2016)
CBC Strategic Housing Market Assessment (SHMA) (2014)
Creative Colchester Strategy & Action Plan (2012)
Safer Colchester Partnership: Strategic Assessment of Crime and Annual Partnership Plan 2012-2013 (2012)
CBC Townscape Character Assessment (2006)
CBC Scott Wilson Strategic Flood Risk Assessment (2008)
CBC Affordable Housing SPD (2011)
CBC Communities Facilities SPD (updated 2013)
CBC Better Town Centre SPD (2012)
CBC Sustainable Design and Construction SPD (2011)
Colchester Borough Council Housing Strategy (2012)
CBC Local Air Quality Management Progress Report (2013)
2016 Air Quality Annual Status Report (ASR) - July 2016
Colchester Environmental Strategy 2014-2019 draft (2014)
Colchester Borough Council's Comprehensive Climate Risk Assessment (2010)
Colchester Borough Council Landscape Strategy (2013)
Colchester Cycling Strategy SPD (2012)
CBC Core Strategy (2008)

CBC Development Policies DPD (2010)
CBC Site Allocations Policies DPD (2010)
Colchester Borough Green Infrastructure Strategy (2011)
Tendring economic development strategy (2013)
Tendring Strategic Housing Market Assessment (2013)
Braintree District Core Strategy (2011)
Babergh Adopted Core Strategy and Adopted Policies (2011 – 2031) Local Plan Document (2014)
Sustainable Development, Tendring District Council Local Plan Proposed Submission Draft Written Statement 2012 (as amended by the 2014 Focused Changes)
TDC Strategic Flood Risk Assessment (SFRA) (2009)
Tendring Open Space Strategy (October 2009)
Landscape Character Assessment, Vol. 1 & Vol. 2, Land Use Consultants on behalf of Tendring District Council, November 2001
Affordable Housing Viability Study, Tribal Consulting Ltd, October 2010, Viability Testing, Peter Brett, August 2013, reports prepared on behalf of Tendring District Council
Clacton Town Centre Vision, Intend, 2009
Celebrate-on-Sea – ‘Putting the fun back into Clacton’ (2010)
Infrastructure Study, Part 2 (January 2010)
Tendring District Historic Characterisation Project, Essex County Council, 2008
Tendring Geodiversity Characterisation Report, Essex County Council, 2009
Climatic Change Strategy 2010-2016, Tendring District Council
Tendring Economic Strategy (October 2013)
Retail Study Update (September 2010)
Chelmsford City Council – Emerging Local Plan and associated evidence base documents

3.3 Baseline Information (Stage A2)

Annex B details the complete Baseline Information profile for the strategic area relevant to the content of the Strategic Section One for Local Plans.

The following section outlines a summary of the key baseline information and therefore the current state of the environment for the three authorities' strategic area.

3.3.1 Economy

- The area covered by this strategic planning approach comprises a large part of the Haven Gateway, an established partnership area which is identified in a range of existing strategy and investment documents. The Haven Gateway includes the Essex administrative areas of Braintree, Colchester, Maldon and Tendring Councils and extends northwards into parts of Suffolk.
- Braintree and Colchester are the major centres of employment within the strategic area. While there are high levels of commuting to London, many residents work and live within the area with significant commuting across borough and district boundaries, reflecting a functional economic geography.
- The area has a mixed economy focused on the service sector, including wholesale and retail, business services, tourism, health and education, alongside manufacturing, logistics and construction. Due to the extensive rural area outside urban settlements, agriculture and its related industries play an important part in the overall economy.
- This rurality also means that there are large areas of open countryside, including protected natural and historic landscapes. Areas of importance for nature conservation are to be found particularly along the coast and river estuaries, while the villages and towns include many built heritage assets.
- Braintree District has a wide employment base of mainly small and medium-sized businesses. In 2011, approximately 58,000 residents worked within the District, 15,000 travelled into the District to work and 32,000 travelled from the District to work in the major centres of London, Chelmsford and Colchester. Unemployment and youth employment rates have been falling and are below the national average.
- Tendring District includes Harwich International Port which has developed into a highly efficient, multi-purpose freight and passenger port handling bulk and container ships as well as roll-on, roll-off ferries and cruise ships. Harwich is one of the major UK ports for ferry and cruise tourism. Harwich is also one of the leading UK freight ports for bulk and container ships.
- The sector employing the most people in Tendring, according to an Economic Development Strategy (2013), was Health which accounted for approximately 17% of jobs, followed by Retail and Education. The Cultural, Visitor and Tourism sector encompasses a range of activities which play an important role in the District's economy. This sector is worth more than £353 million per

annum to the economy and is estimated to provide 7,900 jobs across Tendring District. The majority of jobs and businesses in this sector are located in and around Clacton.

- Model based unemployment figures for Tendring District during the period January 2015 – December 2015 show that the unemployment rate was 5.3% which is higher than that for the East of England.
- Colchester has maintained good levels of employment growth over the last two decades with declining industrial employment being offset by a growth in office jobs.
- Colchester registered 92,300 workforce jobs in 2014 representing an increase of 20% over 1991 levels. This increase was higher than in the UK (14.6%) and similar to the East of England (19.6%), but was lower than employment growth recorded across Essex as a whole (27.9%) over the same period.
- The town centre of Colchester serves as a centre not only for the Borough but for a much wider area of North East Essex, with residents of Braintree, Maldon and Tendring districts travelling into the town to work, shop and use its community facilities.
- Compared to sub-national and national figures, Tendring district has experienced a lower start up rate and a lower de-registration rate of businesses indicating a slightly less robust local economy. Braintree and Colchester are more in line with the county and national business registration and de-registration rates.

3.3.2 Housing

- Braintree District has been one of the fastest growing areas in the country over the past decade. The population of the District is currently approximately 150,000 and is projected to rise substantially by 2033. As life expectancy increases, the age structure is expected to change, with a marked increase in the number and proportion of the population who will be aged 65 and over. The number of one-person households is also expected to increase.
- Colchester delivered 12,644 new homes between 2001/02 and 2014/15 at an average rate of 903 dwellings per year. Given the continuing pressures on the South East housing market, Colchester will need to maintain its good rate of delivery over the next plan period to meet the Objectively Assessed Need figure of 920 houses a year, while also ensuring that increasing quantity is matched with high design quality and sustainable construction.
- In 2014/15, 3.8% of the net dwelling completions, which accounts for 10 dwellings, were affordable within Tendring, as opposed to 73.9% in Braintree and 40.0% in Colchester. This data indicates that affordable housing is an issue, particularly in Tendring and to a lesser extent, in Colchester.
- The average dwelling price within Tendring District is £168,829. This is significantly lower than the county and national averages. The average dwelling prices for Essex is similar to the national average, but Tendring District is much lower. Braintree has a higher average dwelling price than Tendring and Colchester at £215,851.
- Meeting the housing needs in the Districts and Borough is an important issue. The updated SHMA for Braintree, Colchester, Chelmsford and Tendring Councils indicates that the majority of market housing and affordable housing should be 2 and 3 bedroom properties. This trend is replicated when assessing all housing, with 70.3% of housing need across the Districts and

Boroughs is 2 and 3 bedroom dwellings.

- Tendring has seen no increase in Gypsy and Traveller provisions since January 2014. Caravan counts in Braintree have increased since January 2014, but with fluctuations in measuring periods between 2014 and 2016 due to not tolerated sites being removed from the statistics, presumably due to eviction or inclusion in the statistics for tolerated sites. A similar trend is apparent in Colchester, with an overall increase in sites for Gypsy and Traveller populations.

3.3.3 Biodiversity

- Ramsar sites are wetlands of international importance designated under the Ramsar Convention which have a high degree of protection. They often incorporate Special Protection Areas (SPAs) and Special Areas for Conservation (SACs). In the Plan Area there are a number of Ramsar sites which include Hamford Water, and parts of the Colne and Blackwater estuaries which include coastal areas, estuaries, rivers and lakes/reservoirs. These Ramsar sites are also SPAs.
- SACs are sites of international importance designated under the EC Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora (the Habitats Directive). There is 1 SAC in the area: a large coastal area known as Essex Estuaries stretching from Shoeburyness to Jaywick Sands.
- Tendring District has a rich geodiversity which is varied and largely irreplaceable. There are 10 sites of Special Scientific Interest (SSSIs) in the District, notified specifically for their geological value. The District is also home to the Stour, Orwell and Colne Estuaries and Hamford Water, SPA and Ramsar sites, designated for the conservation and protection of the habitats of migratory and endangered birds, scarce plants and invertebrates and for the conservation of wetlands and are sites of national and international importance.
- Colchester has a similarly rich biodiversity, including 8 SSSIs, the Colne Estuary SPA, the Blackwater Estuary and Abberton Reservoir SPA.
- There are a number of National Nature Reserves located in the Plan Area: Blackwater Estuary, Colne Estuary, Dengie and Hamford Water.
- All 15 SSSIs in Tendring and all 8 sites in Colchester are meeting the target of at least 95% of the SSSI area being brought into favourable condition. 3 of the 4 SSSIs in Braintree are meeting the target, but Bovingdon Hall Woods is at 93.30% favourable or unfavourable recovering. Colne Estuary in Tendring and Colchester, Stour Estuary in Tendring, Bovingdon Hall in Braintree and Blackwater Estuary in Colchester are the only SSSIs and not meeting the PSA target for 100% of their area, however the area not in a favourable or favourable recovering condition is small.

3.3.4 Landscapes

- Within the area's landscape there are many areas of special interest which have been designated and protected from inappropriate development. The main areas of importance are Landscape Character Areas (LCAs), an Area of Outstanding Natural Beauty (AONB), Protected Lanes and Special Verges.
- The Essex Landscape Character Assessment (Chris Blandford Associates, 2003) is based on the Countryside Agency's guidance, and establishes a 'baseline' of the existing character of the

Essex landscape. The assessment involved a broad review of the landscape identifying 'Landscape Character Areas' within Essex. They are areas with a recognisable pattern of landscape characteristics, both physical and experiential, that combine to create a distinct sense of place.

- Protected lanes have significant historic and landscape values. They generally originate from pre-historic track ways, which have been in continual (if lighter) use since. Protected lanes are often narrow, sunken and enclosed by a combination of mixed deciduous hedges and mature trees, ditches and raised verges that can be indications of great age. The volume weights and speed of traffic is often limited to preserve the special character and due to their age and use they also have great biological value. Protected Lanes and on-statutory assets, however hold some weight in planning decisions. Braintree District Council include consideration of Protected Lanes and Colchester Borough Council have emerging evidence base on the matter.
- In Colchester and the north west of Tendring District is the Dedham Vale Area of Outstanding Natural Beauty (AONB) covering an area of 90 sq. km, designated for conservation due to its significant landscape value. Made famous by the paintings of Constable and Gainsborough, its traditional grasslands, wildflower meadows and hedgerows provide an opportunity for both residents and visitors to enjoy the peace and beauty of what are among some of England's most precious and vulnerable landscapes. In addition, there are discussions currently underway regarding the possibility of expanding the Dedham Vale AONB westward into the northern part of Braintree District. Proposed by the Stour Valley Partnership, the proposals are supported by Essex County Council, Braintree District Council and Colchester Borough Council.
- Tendring has a significant concentration of grade 1 and 2 agricultural land to the north west of the District on the border with Colchester Borough. The majority of the central party of the District is grade 3 land, with small areas of grade 2 running from south west to north east through the centre of Tendring. Coastal areas have lower quality land, with grade 4 land to the south around Colne Point and Holland-on-Sea and grade 4 and 5 land around Harwich and Dovercourt.
- Grade 1 and 2 agricultural land is predominantly in the north east of Colchester Borough, with some areas of grade 2 land to the west and north west. Land to the south of the borough is lower quality, the majority of which is grade 3 with some areas of grade 4 and 5 along the banks of the river Colne and Abberton reservoir.
- Braintree predominantly features grade 2 agricultural land across the majority of the District, with areas of grade 3 land throughout. Some more concentrations of grade 3 land are notable towards the north of the District. There is an area of poor quality grade 5 land to the east of Stisted and Braintree town.

3.3.5 Population and Social (including Health and Education and Skills)

- The area's population has been projected to increase (ONS, 2014) to 2021. Some of the highest increases in populations county-wide are forecast to be in Braintree District, Colchester Borough and Tendring District.
- The population in Tendring, Braintree and Colchester are all predicted to increase over Local Plan Periods, with the highest growth rates in Colchester, followed by Tendring and Braintree. The population structure in Colchester is more weighted towards 20-44 year olds, similar to the trends in Braintree but with less dominance in this age group. Contrastingly, Tendring has a

higher population of people aged over 65. This age group is also predicted to increase over Local Plan periods.

- Within Tendring District, the 2011 Census puts the population at approximately 138,100 with an average density of 4.1 people per hectare.
- Tendring District is projected to grow by 14.4% (from 2011 Census numbers) to approximately 158,000 by the end of the plan period. Recent decades have seen a trend towards an ageing population in the District and this is projected to continue in the future.
- Based on the 2011 Census, there were 62,105 households in the Tendring District, the majority of which were privately owned housing. Average household size in the district was 2.2 people, slightly lower than the national, regional and county, averages.
- The average property price in September 2012 in Tendring District was £180,408; this is noticeably lower than average prices in England and Essex.
- At the time of writing there were 47 academy schools in Tendring District, 40 primary schools and 7 secondary schools. There were also 2 adult education centres. Primary school numbers, as forecast in the Commissioning Schools for Essex document, are set to rise in the five year period 2013-2018 to 9,928, due to rising births and new housing, requiring plans to be developed with local schools to increase the provision in the District.
- Overall pupil numbers in secondary schools in Clacton are predicted to decline in the period 2013/18 to 8,000. However, demand for year 7 places in Clacton is forecast to increase from 2017/2018 onwards to 8,395 once pupils from anticipated new housing are included in the forecast.
- Colchester Borough's population has grown by 15.6% between 2001 and 2014 and was estimated to stand at 180,420 people in mid-2014. The borough's growing population is accommodated within a spatial structure defined by the urban area at its centre, surrounded by a rural hinterland with three smaller centres, Tiptree, West Mersea and Wivenhoe.
- In Braintree District, the level of demand for secondary school places in Year 7 is predicted to rise over the course of the next 5 years. In Colchester, pressure on primary school places is forecast to continue in line with considerable housing development in the area. In the Stanway area in particular new housing developments are progressing and there is likely to be more pressure on school places, which will be monitored closely.
- Secondary school Year 7 intakes in Colchester are forecast to rise significantly from September 2017 onwards and options are being explored in active collaboration with the schools in Colchester town to provide the additional places required.
- Tendring has the highest level of deprivation for a local authority within Greater Essex. It is estimated that almost a fifth of people in the District live in seriously deprived neighbourhoods.
- While Colchester is less deprived than Essex as a whole, 2 small areas in Colchester were in the top 10% most deprived in England in 2010, Magnolia in St. Andrew's Ward and St Anne's Estate in St Anne's ward. Sustainable development for the future will require the development of sustainable land use patterns that maximise accessibility between jobs, homes, services and facilities.
- Of the 326 local authorities within England, Tendring ranks within the top 25% for extent and the top 16% for the remaining three measures –local concentration, average score and average

rank. Braintree and Colchester are less deprived, with Colchester ranking 6th in Essex on average and Braintree less deprived ranking 8th in Essex on average.

- Life expectancy of residents within Tendring District is lower than the regional and national averages with men living for an average of 78.7 years and women on average living 82.0 years. Braintree and Colchester have higher life expectancies for men and women than the national figures, but are both below the regional figures. In general, life expectancy is increasing within the Districts and nationwide. Colchester has the highest life expectancies of the three Districts for women, at 83.5 and Braintree has the highest for men at 80.1. The implications of this will mean that as people live longer there will be increased pressure on services and housing for the elderly.
- Participation in sport has seen a reduction in Tendring and Colchester from the previous year, and Braintree also has reduced overall since 2012-13 despite a small increase in the previous year. In addition, obesity in Tendring is more prevalent than Braintree, Colchester, the region and the nation. Braintree also has a higher proportion of adults classified as obese but a lower proportion of children aged 4-5. Colchester has lower percentages of both adults and children aged 4-5 classified as obese.
- Braintree District Council has invested in new and enhanced leisure facilities in the District. In 2014 a new leisure centre with swimming pool and gym opened in Witham, and facilities at Braintree Sports & Health Club and at Braintree Swimming and Fitness were expanded and enhanced. Outdoor gyms have also been provided in Braintree and Witham.

3.3.6 Air Quality and Noise

- There are no Air Quality Management Areas (AQMAs) located in Braintree District. The main air quality issues in the District relate to nitrogen dioxide (NO₂) and particulate emissions from vehicles travelling on the A12 and A120.
- There are no AQMAs within Tendring District.
- There are four Air Quality Management Areas in Colchester, located in the following areas:
 - Area 1 - Central Corridors (including High Street Colchester; Head Street; North Hill; Queen Street; St. Botolph's Street; St. Botolph's Circus; Osborne Street; Magdalen Street; Military Road; Mersea Road; Brook Street; and East Street).
 - Area 2 - East Street and the adjoining lower end of Ipswich Road.
 - Area 3 - Harwich Road/St Andrew's Avenue junction.
 - Area 4 - Lucy Lane North, Stanway; Mersea Road; and Brook Street.
- The Tendring District Council Air Quality Progress Report shows that Tendring District is currently meeting the air quality objectives. The automatic data does show there is a risk of exceeding the nitrogen dioxide objective at the Clacton Town Hall site; however this site experienced low data capture due to networking problems.

3.3.7 Climatic Factors

- Tendring District, Colchester Borough and Braintree District all consume more energy from non-

renewable sources as a percentage of their consumption compared to the East of England as a whole. More than three quarters of Tendring and Braintree District's 2,532.2GWh and 3,019.1GWh respective energy consumption is from petroleum products and natural gas. For Colchester, the percentage is just below 75% for the same energy sources. Colchester and Braintree are closer to the East of England average than Tendring. Registering 38.27% of their consumption deriving from petroleum, Tendring is lower than the percentage for Braintree, Colchester and the East of England. In contrast only 20.6GWh of energy consumed is from renewable bioenergy and waste sources, equating to just 0.81% of energy consumption in Tendring. This is comparatively low when measured against the 0.94% in Braintree and 1.01% achieved across the East of England region, but higher than the 0.71% achieved in Colchester.

- Industry, domestic and transport each produce roughly 1/3 of the total CO₂ emissions within Colchester, however there is more variation in the statistics for Tendring and Braintree. The industry and commercial sector produces the smallest amount in every District at 28.8% for Tendring, 29.7% in Braintree and 31.6% in Colchester. Transport produces the most in Braintree at 37.4%, whereas domestic emissions are the highest in Tendring and Colchester at 41.6% and 34.8% respectively.
- Tendring has one of the lowest reductions in CO₂ emissions relative to the 2005 data of all the Districts in Essex at just 11.5%. This is 6.1% below the average reduction per capita for Essex. Braintree and Colchester are higher than the Essex average at 18.7% and 18.6% respectively.

3.3.8 Transport

- The area's strategic road and rail network is heavily used, particularly given the proximity to and connectivity with London. The principal roads are the A12 and A120, while the A130, A131, A133 and A414 also form important parts of the strategic road network.
- The Great Eastern Main Line provides rail services between London Liverpool Street and the East of England, including Witham, Chelmsford, Colchester and Clacton-on-Sea. It also carries freight traffic to and from Harwich International Port, which handles container ships and freight transport to and from the rest of the UK. Harwich is also one of the major UK ports for ferry and cruise departures.
- Crossrail is expected to start operating in the first part of this plan period with services commencing just south of Chelmsford in Shenfield. The opportunities that Crossrail will bring in terms of additional capacity and quicker journeys to a wider choice of destinations will be a contributor to the continued attractiveness of north Essex as a place to live and to do business.
- The growing demand for the use of airports, including London Stansted, will create additional associated pressures on road and rail infrastructure. The County Council, along with South East Local Enterprise Partnership, local and national agencies and other organisations, will also need to work collaboratively with the Local Planning Authorities to ensure infrastructure meets demand for enhanced economic growth.
- Transportation provision in Tendring District includes 14 railway stations with connections to Colchester, Chelmsford, Ipswich, Norwich, Stratford and London. The average journey time between Clacton-on-Sea and London Liverpool Street is 1 hour 26 minutes.
- Within Tendring, there are numerous bus routes throughout the District including frequent inter-

urban routes linking villages to the larger urban areas of the district and the large town of Colchester in the adjoining borough. The dispersed geography of the District means that there is a reliance on the use of private cars.

- Colchester Borough's self-containment rate (share of residents who also work within the Borough) was 69% in 2011, with 24,850 employed residents leaving the Borough to work. Of these 25% go to Greater London, 15% to Tendring District, 15% to Braintree District and 10% to Chelmsford City. The Local Plan will need to manage the continuing pressures of vehicle congestion and parking while developing practical solutions to minimise the need to travel and provide non-car based alternatives to movement around the Borough.
- There are network efficiency issues on a number of strategic inter-urban routes which are operating at or near to capacity. In addition, the capacity of the A12 is further constrained by the operation of the junctions and sub-standard slip roads. The A12, managed by Highways England, has recognised issues with poor reliability and delays, and the Roads Investment Strategy (2015 – 2020) seeks to implement major improvements to address these issues. The A120 between Braintree and the A12 junction suffers from heavy congestion, high accident risk and poor journey reliability. ECC is leading a project, with Highways England, to study options for dualling this section of the route. A number of key junctions on the local highway network also operate at 'over capacity' during peak hours.
- Proportionately more households own 1 car or van within Tendring District at 45.3%, which is slightly higher than national and regional statistics. Colchester is also higher than the regional and national figures at 43.8% and Braintree has the lowest proportion of households owning 1 or more car at 40.3%.
- Tendring and Colchester are above the regional and national averages for households owning 1 or more cars, in contrast with Braintree which is lower. Despite this, a lower proportion of people use a private car or van to travel to work. Similarly, Colchester has fewer employees travelling to work by car or van, which could be as a result of a higher number of employment opportunities closer to their homes negating the need for travel by car. The same reasoning applies to Braintree, where more employment opportunities are in rural locations and more people travel to work by car or van.
- All Districts and Boroughs registered significant proportions of residents travelling outside to other local authority areas to find employment. Just 59.9% of residents in Braintree remained in the District for their work, which was the lowest percentage of the Districts and Boroughs. Tendring was the next highest, followed by Colchester with the lowest proportion of residents travelling elsewhere for employment.

3.3.9 Water

- The main rivers in the area are the Colne and the Pant/Blackwater. The north of the area has relatively high contamination vulnerability because of the porosity of the underlying chalk.
- In addition to natural water bodies there are various artificial water bodies in the county. Abberton is one of the County's largest inland water resources.
- Water management is challenging in the Strategic Area given the combination of high development growth and it being one of the driest counties in England. Annual rainfall in the

area is only 65% of the average in England and Wales. In respect of water quantity a significant portion of the resource is considered to be 'water stressed'; the resource availability status of rivers and aquifers show that they are generally over abstracted; and not self-sufficient in relation to local sources of water supply and needs to import substantial quantities of water to satisfy existing demand.

- The latest Colchester Water Cycle Study identified issues with a number of smaller ward areas within the Borough. These are:
 - North Colchester – Wastewater treatment and Wastewater Infrastructure
 - Colchester Town Centre and Fringe – Wastewater Treatment and Wastewater Infrastructure
 - South Colchester (Garrison) – Wastewater Treatment and Wastewater Infrastructure
 - East Colchester - Wastewater Treatment and Wastewater Infrastructure
 - Stanway - Wastewater Treatment and Wastewater Infrastructure
 - Colchester other areas - Wastewater Treatment
 - Wivenhoe/Rowhedge - Wastewater Treatment and Wastewater Infrastructure
 - Tiptree – Water Supply Resources, Wastewater Infrastructure and more recently Environment – Water Quality
 - West Mersea – Wastewater Infrastructure
 - Marks Tey – Wastewater Treatment and Environment – Water Quality
 - Other Villages – Eight Ash Green (EAG) and Langenhoe - Wastewater Treatment
- The key activities required to resolve the “red” time periods above are:
 - Water Supply - Implementation of proposed transfer of water from Planning Zone 56 - Colchester to Planning Zone 63 - Tiptree
 - Wastewater - Implement proposed discharge consent increases and process improvements at Colchester STW and Copford STW. Upgrade/extension of existing sewers or implementation of new sewer
 - Water Quality - Implementation of BAT technologies, and therefore significant investment, to keep pollution levels within consent.
- The latest Tendring Water Cycle Study identified issues with a number of smaller wards within the District. These are:
 - Jaywick – Wastewater Treatment and Wastewater Infrastructure
 - Frinton-on-Sea and Walton-on-the-Naze – Wastewater Infrastructure
 - Brightlingsea – Wastewater Infrastructure
 - Lawford, Manningtree and Mistley – Wastewater Infrastructure
 - Thorpe le Soken – Wastewater Infrastructure
 - St Osyth – Wastewater Infrastructure
- The key activities required to resolve the “red” time periods above are:
 - Wastewater - Detailed review of development and discharges to establish the required increase in the consented DWF for Jaywick STW, and apply if necessary.

- Extension and upgrade/capacity increase of current sewer network.
- In Braintree, the latest Water Cycle Study concludes that potable water may require an upgrade, but that potable water supply can support the predicted growth in the District. A stage 2 report explores the possibility of reducing water demand through dwelling design. Additional Wastewater Treatment Works (now Water Recycling Centres) and Sewerage Networks may be required as environmental water quality is highlighted as a cause for concern, but again there is confidence that existing treatment facilities can support the additional wastewater.

3.3.10 Flooding

- The National Planning Policy Framework seeks to avoid inappropriate development in areas at risk of flooding, but where development is necessary, to ensure that it is safe and does not increase flood risk elsewhere.
- Surface water flood risk is relatively high with all main settlements assessed being ranked in the top 1,000 settlements most susceptible to surface water flooding.
- Significant levels of flood risk have been identified along the Essex coast and inland along river stretches.

3.3.11 Cultural Heritage and Townscape

- The historic environment should be effectively protected and valued for its own sake, as an irreplaceable record which contributes to our understanding of both the present and the past.
- There is a concentration of listed buildings in the district of Braintree and also around historic towns such as Colchester.
- Tendring District has more than 960 Listed Buildings. The District also benefits from 27 Scheduled Monuments which include above and below ground features, 3 Historic Parks and Gardens and 9 Protected Lanes, preserved for their historic indication of ancient road patterns in the District. The District also contains 20 Conservation Areas.
- Archaeological deposits across Tendring, Braintree and Colchester range in date from the Palaeolithic, through to structures related to the Cold War. However, it should also be remembered that the EHER records represent only the known deposits with many new sites being identified each year. Archaeological sites (and their setting) constitute a finite, non-renewable resource which is vulnerable to damage. There is a need for updated Historic Characterisation Studies within the Districts and Borough to provide a more accurate description of the archaeological deposits in order to better understand the vulnerability of the historic environment.
- According to the Heritage at Risk Register (2016), there are 15 assets listed as being at risk in Tendring. This consists of 7 Scheduled Monuments, 4 Listed Buildings and 4 Conservation Areas. There are 7 assets listed as being at risk in Braintree. This consists of 3 Scheduled Monuments, 2 listed places of worship and 2 Conservation Areas. There are 10 assets listed as being at risk in Colchester. This consists of 4 Scheduled Monuments, 2 listed places of worship, 1 Listed Building and 3 Conservation Areas.
- Colchester Borough boasts 52 Scheduled Monuments, which is the highest number when

compared with Braintree and Tendring. Braintree District contains 40 Scheduled Monuments and Tendring District benefits from 27 Scheduled Monuments which include above and below ground features.

- There are 3 Registered Parks and Gardens within Tendring District, 8 Registered Parks and Gardens within Braintree District and 4 Registered Parks and Gardens within Colchester Borough which have each been designated by English Heritage as being “a park or garden of special historic interest”.
- Braintree has the most Conservation Areas of the 3 authorities with 39. Both Tendring and Colchester have 22 Conservation Areas which are defined as historical settlements and buildings having ‘special architectural or historical interest, the character of which is desirable to preserve or enhance’.

3.3.12 Minerals and Waste

- The Strategic Area has extensive deposits of sand and gravel. The sand and gravel resources in Essex are significant in national, sub-national and local terms - Essex is one of the largest producers in the UK; most geographically extensive and significantly mixed within the centre and north of Essex – namely the districts of Uttlesford, Braintree, Chelmsford, Colchester and Tendring.
- The Replacement Waste Local Plan (Inspector’s report due soon following Examination in Public in late 2016), as published by Essex County Council and Southend-on-Sea as the combined Waste Planning Authority, allocates 4 sites within Tendring, 1 in Braintree and 2 within Colchester for the treatment of biological waste, inert waste, inert landfill and other waste management. These are:
 - Tendring
 - Morses Lane, Brightlingsea
 - Sloughs Farm, Ardleigh
 - Sunnymead, Elmstead & Heath Farms
 - Wivenhoe Quarry Plant area
 - Braintree
 - Rivenhall
 - Colchester
 - Bellhouse Landfill Site
 - Fingringhoe Quarry
- Three sites within Braintree District have been identified as preferred or reserved sites for primary mineral extraction of sand and gravel in the Essex Minerals Plan (Policy P1, Table 5), which was adopted in July 2014. These include sites at Bradwell Quarry (Rivenhall Airfield) comprising Site No’s A3 – A7; one site at Broadfield Farm, Rayne (Site No A9); and one site on land at Colemans Farm (Site No A46).
- There are two sites within Tendring identified as preferred or reserved for primary mineral extraction of sand and gravel. These are Site Nos A20 – Sunnymead, Alresford and B1 – Slough

Farm, Ardleigh.

- There is one site within Colchester identified as preferred or reserved for primary mineral extraction of sand and gravel. This is Site No A13 - Colchester Quarry, Fiveways.
- The majority of the sand and gravel produced in Essex (about 78%) is used within the County itself. This position looks unlikely to change over the long-term. Consequently the main factor influencing production of sand and gravel in the future will be the need to meet the minerals demand for the whole of Essex created by major development and new infrastructure projects within Essex itself.
- The silica sand resources in Essex are processed for industrial purposes at Ardleigh from a mixed resource, north-east of Colchester. Industrial uses include glassmaking, foundry casting, ceramics, chemicals and water filtration

3.3.13 Trans-national Implications

The Scoping Report explored the state of the environment within the North Essex area, however consideration has since been given to the possibility of trans-national impacts resulting from the scale of growth and those broad locations identified for development within Section One.

In view of this, no trans-national effects were deemed likely as a result of the Section One content singularly or in combination with the relevant Section Twos of the three Local Plans or any other plans and programmes. This is as result of the Section One Habitats Regulation Assessment Screening Assessment and associated Appropriate Assessment (AA) (2017) which explores the environmental impacts of the Section One on international and national designations for nature conservation. The AA identifies that although impacts arise as a result of the level of growth in Section One due to recreation, effective mitigation is possible.

3.3.14 Data Limitations

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

It should be noted that while the baseline will be continually updated throughout the SA process, the information outlined within this report represents a snapshot of the information available at the beginning of April 2017.

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

The outcome of Stages A1 – A2 in the SA Process is the identification of key sustainability issues and problems facing the Strategic Area which assist in the finalisation of a set of relevant Sustainability Objectives. Issues are also identified from the review of plans and programmes and a strategic analysis of the baseline information.

Sustainability Objectives are also drawn from an amalgamation of the SA Scoping Report of each authority's Local Plan in order to align the separate SAs of both the Strategic Section One for Local Plans and individual Local Plans (representing Section Two in each authority).

The appraisal of the Strategic Section One for Local Plans will be able to evaluate, in a clear and consistent manner, the nature and degree of impact and whether significant effects are likely to emerge from the Strategic Section One for Local Plan's proposed content. The alignment between the Sustainability Objectives in this SA with the Objectives of each authority's separate Local Plan SA will ensure an integrated approach between strategic issues and those that are local and specific to each authority.

The following table outlines the stages which led to the formulation of the Sustainability Objectives for the Strategic Section One for Local Plans, which were based on key sustainability issues and considerations for the whole Strategic Area. The state of the environment in absence of the Section One is derived from the Baseline Information addressed in Annex B accompanying this report and the wider benefits that can be expected of growth over a larger strategic area and in accordance with Garden City principles.

Table 3: Key Sustainability Issues and Problems

Local Plans and Programmes	Description / Supporting Evidence	State of environment in absence of the Strategic Section One for Local Plans	Sustainability Objective (SO)
Social integration	Some of the highest increases in populations county-wide are forecast to be in Colchester Borough and Tendring District and there is a need to integrate new communities with existing ones.	The absence of a strategic approach across the HMA is likely to lead to the allocation of development across the area that can be considered comparatively more piecemeal and not of the scale to stimulate wider infrastructure benefits, and ancillary development requirements, that can be of wider benefit to new and existing communities.	1) Create safe environments which improve quality of life, community cohesion
Quality of life	Tendring has the highest level of deprivation for a local authority within Greater Essex.		

Local Plans and Programmes	Description / Supporting Evidence	State of environment in absence of the Strategic Section One for Local Plans	Sustainability Objective (SO)
Population growth	<p>The latest population trend data shows that the population in the HMA area is growing annually.</p> <p>The area's population has been projected to increase (ONS, 2014) to 2021. Some of the highest increases in populations county-wide are forecast to be in Colchester Borough and Tendring District.</p>	Without a strategic approach within the HMA, it is probable that each authority would have to explore the allocation of marginal and less sustainable land.	2) To ensure that everyone has the opportunity to live in a decent, safe home which meets their needs at a price they can afford
The need for specific housing types	There is an identified need for specific types of housing throughout the strategic area including housing for older people.	As indicated by need, market forces alone can not be expected to deliver all types of housing need in the HMA. The exploration of Spatial Strategy and Section Policies that are wider in scope across the HMA / strategic area, including Garden Community options, enables sustainable growth to be well dispersed in reflection of needs across the HMA. Also and importantly the Section One ensures the delivery of such housing through adhering to Garden City Principles.	
Affordable housing	In 2014/15, 3.8% of the net dwelling completions, which accounts for 10 dwellings, were affordable within Tendring, as opposed to higher percentages in Braintree and Colchester. This indicates that affordable housing is an issue.	The scope of the Section One across the HMA can ensure that affordable housing delivery and units for older people can significantly increase. It is also a Garden City Principle and requirement of such strategic development. In the absence of the Strategic Section One for Local Plans, including Garden Communities, there is a possibility that a higher proportion of smaller sites are allocated for development in Local Plans, which would not provide such significant	
Ageing population	The population structure in Colchester is more weighted		

Local Plans and Programmes	Description / Supporting Evidence	State of environment in absence of the Strategic Section One for Local Plans	Sustainability Objective (SO)
	towards 20-44 year olds, similar to the trends in Braintree but with less dominance in this age group. Contrastingly, Tendring has a higher population of people aged over 65. This age group is also predicted to increase over Local Plan periods.	increases in affordable housing and housing for older people.	
Gypsy and Traveller requirements	Tendring has seen no increase in Gypsy and Traveller provisions since January 2014. Caravan counts in Braintree have increased since January 2014, but with fluctuations in measuring periods between 2014 and 2016 due to unauthorised sites being removed from the statistics, presumably due to eviction or inclusion in the statistics for tolerated sites. A similar trend is apparent in Colchester.	Garden Communities, as explored in the Strategic Section One for Local Plans have the capability, and are likely to provide adequate Gypsy and Traveller provision, located in sustainable areas, that is unlikely to otherwise be forthcoming from call-for-sites processes.	
Healthcare services	Health services in the Strategic Area are either underprovided or otherwise oversubscribed. Life expectancy of residents within Tendring District is lower than the regional and national averages with men living for an average of 78.7 years and women on average living 82.0 years. Braintree and Colchester have higher life	In exploring options for strategic level growth within Section One, relevant strategic policies and Garden Communities have the opportunity to integrate adequate health service and recreation provision into the settlement, or can otherwise ensure that accessibility to healthcare facilities is improved. In the absence of this approach, it is possible that current trends will continue and negative implications be exacerbated.	3) To improve the health of the District's residents and mitigate/reduce potential health inequalities

Local Plans and Programmes	Description / Supporting Evidence	State of environment in absence of the Strategic Section One for Local Plans	Sustainability Objective (SO)
	expectancies for men and women than the national figures, but are both below the regional figures.		
Participation in sport and obesity	Participation in sport has seen a reduction in Tendring and Colchester, and Braintree also has reduced overall since 2012-13. In addition, obesity in Tendring is more prevalent than Braintree, Colchester, the region and the nation.		
Business start ups	Compared to sub-national and national figures, Tendring district has experienced a lower start up rate and a lower de-registration rate of businesses indicating a slightly less robust local economy. Braintree and Colchester are more in line with the county and national business registration and de-registration rates.	The link between homes and jobs is a key tenet of sustainability, as is ensuring progressive growth in employment opportunities across a range of sectors. This is best addressed at a strategic level through Section One policies and the opportunities presented by Garden Communities. This ensures that a mix can be adequately provided. In contrast, without such an approach it can be expected that out commuting will continue and the location of new housing and employment opportunities would remain disparate. Garden Communities should also, where sensitively located, ensure that town centres remain viable and offer employment opportunities in easy commuting distance to homes.	4) To ensure and improve the vitality & viability of centres 5) To achieve a prosperous and sustainable economy that creates new jobs, improves the vitality and viability of centres and captures the economic benefits of international gateways
Rural employment	Tendring District is predominantly rural in nature; however the majority of businesses are located in an urban location. The majority of businesses in Colchester are in urban areas.		

Local Plans and Programmes	Description / Supporting Evidence	State of environment in absence of the Strategic Section One for Local Plans	Sustainability Objective (SO)
Town centres	Town centres within the North Essex and nationally area are under threat from an increase in non-town centre uses through permitted development rights and out of centre retail opportunities which are less congested.		
Commuting patterns	All the authorities registered significant proportions of residents travelling outside to other local authority areas to find employment. Just 59.9% of residents in Braintree remained in the District for their work, which was the lowest percentage of the Districts and Boroughs. Tendring was the next highest, followed by Colchester with the lowest proportion of residents travelling elsewhere for employment.		
International and European wildlife designations	In the Plan Area there are a number of Ramsar sites which include Hamford Water, and parts of the Colne and Blackwater estuaries which include coastal areas, estuaries, rivers and lakes/reservoirs. These Ramsar sites are also SPAs. There is also one 1 SAC in the area: a large coastal area known as Essex Estuaries	The exploration of strategic growth in a plan led system at an early stage enables the results and recommendations of HRA and AA to be factored into plan making at the strategic level. This ensures that mitigation strategies can be developed as per the recommendations of these studies to alleviate pressure on designations and eradicate any 'likely significant effects.'	6) To value, conserve and enhance the natural environment, natural resources, biodiversity and geological diversity

Local Plans and Programmes	Description / Supporting Evidence	State of environment in absence of the Strategic Section One for Local Plans	Sustainability Objective (SO)
National and local wildlife designations	There are a number of National Nature Reserves, SSSIs, Local Wildlife Sites and Local nature Reserves in the strategic area.	The exploration of strategic growth in a plan led system at an early stage, enables the green infrastructure of the strategic area to be interconnected and enhanced through a joined-up approach to new settlements and associated economies of scale that could otherwise not be expected. The scope of Section One ensures that green infrastructure is better integrated across the strategic area.	
Car ownership	Tendring and Colchester are above the regional and national averages for households owning 1 or more cars, in contrast with Braintree which is lower.	Car ownership can be expected to increase without the development of solutions that deliver truly sustainable options at a strategic level that ensure a range of employment opportunities and services are accessible by sustainable means.	7) To achieve more sustainable travel behaviour, reduce the need to travel and reduce congestion
Congestion	Congestion is common on specific sections of the strategic road network.		
Air quality	There are a number of AQMAs in Colchester		
Congestion and interconnectivity	There are network efficiency issues on a number of strategic inter-urban routes which are operating at or near to capacity.	Without a strategic plan-led approach to growth, it is possible that development requirements on a district / borough wide basis can conflict in the wider area in regard to congestion. The Section One enables a joined up approach to growth that contributes to wider interconnectivity and better transport solutions / improvements.	8) To promote accessibility, ensure that development is located sustainably and makes efficient use of land, and ensure the necessary infrastructure to support new development
Transport infrastructure	There is a strategic need for transport infrastructure improvements associated with the A12 and A120		
Rural transport	The strategic area is largely rural in nature and rural		

Local Plans and Programmes	Description / Supporting Evidence	State of environment in absence of the Strategic Section One for Local Plans	Sustainability Objective (SO)
	public transport services and interconnectivity is poor.		
Educational achievement	Tendring on average has lower proportions of students achieving KS4 results across all measures when compared with Braintree and Colchester. This trend extends to adult qualifications, where Braintree and Colchester are above regional and national averages for adults with NVQ1 level qualifications or higher.	Solutions to address these two issues can be considered to be feasible and better aligned across the strategic area through a strategic approach. Garden Communities and strategic policies can ensure the incorporation of schools and stimulate the provision of facilities by meeting required dwelling yield thresholds.	
School capacity	School capacities are forecast to be in deficit, when adjusted for new housing requirements		
Heritage assets at risk	According to the Heritage at Risk Register (2016), there are 15 assets listed as being at risk in Tendring. This consists of 7 Scheduled Monuments, 4 Listed Buildings and 4 Conservation Areas. There are 7 assets listed as being at risk in Braintree. This consists of 3 Scheduled Monuments, 2 listed places of worship and 2 Conservation Areas. There are 10 assets listed as being at risk in Colchester. This consists of 4 Scheduled Monuments, 2 listed places of worship, 1 Listed Building	A plan-led approach over the wider strategic area ensures that housing and employment needs can be met in more suitable areas regarding the protection of the historic environment; in the absence of this approach district / borough wide needs would be met more independently and development pressures could lead to the allocation of less suitable land or urban concentration / expansion at higher densities. This could impact on Conservation Areas and historic cores. The exploration of a plan-led system at the strategic level ensures a consistency of approach in regard to the historic environment and historic landscapes. Garden Communities at the scales identified also ensures that	9) To conserve and enhance historic and cultural heritage and assets and townscape character

Local Plans and Programmes	Description / Supporting Evidence	State of environment in absence of the Strategic Section One for Local Plans	Sustainability Objective (SO)
	and 3 Conservation Areas.	mitigation strategies can be successfully and holistically integrated over a wide area with additional potential for the enhancement of any heritage assets or their settings.	
Listed buildings	There is a concentration of listed buildings in the district of Braintree and also around historic towns such as Colchester.		
Historic towns	Colchester is the country's oldest town and the historic environment should be effectively protected and valued for its own sake, as an irreplaceable record which contributes to our understanding of both the present and the past.		
Renewable energy use	Tendring District, Colchester Borough and Braintree District all consume more energy from non-renewable sources as a percentage of their consumption compared to the East of England as a whole	Solutions to address this issue can be considered to be feasible at the strategic level that can incorporate and stimulate the provision for renewable energy and energy efficiency aspirations through economies of scale.	10) To make efficient use of energy and reduce contributions to climatic change through mitigation and adaptation.
Water scarcity and management	Water management is challenging given the combination of high development growth and it being one of the driest counties in England. In respect of water quantity a significant portion of the resource is considered to be 'water stressed'; the resource availability status of rivers and aquifers show that they are generally over	In the absence of the strategic Section One for Local Plans, development could come forward that does not explore holistic approaches to meeting water demand within the strategic area.	11) To improve water quality and address water scarcity and sewerage capacity

Local Plans and Programmes	Description / Supporting Evidence	State of environment in absence of the Strategic Section One for Local Plans	Sustainability Objective (SO)
	abstracted; and not self-sufficient in relation to local sources of water supply and needs to import substantial quantities of water to satisfy existing demand		
Fluvial flood risk	Although flooding cannot be completely prevented, its impacts can be avoided and reduced through effective planning and land management. The National Planning Policy Framework seeks to avoid inappropriate development in areas at risk of flooding, but where development is necessary, to ensure that it is safe and does not increase flood risk elsewhere.	A plan-led approach over the wider strategic area ensures that housing and employment needs can be met in areas that are less susceptible to flooding; in the absence of this approach district / borough wide needs would be met more independently and development pressures could lead to the allocation of less suitable land or urban concentration / expansion at higher densities which would exacerbate surface water flood risk. The exploration of Garden Communities at the scales identified also ensures that sustainable drainage methods can be successfully and holistically integrated over a wide area with additional potential for biodiversity gain.	12) To reduce the risk of fluvial, coastal and surface water flooding
Surface water flood risk	Surface water flood risk is relatively high with all main settlements assessed being ranked in the top 1,000 settlements most susceptible to surface water flooding.		
Coastal flood risk	Significant levels of flood risk have been identified along the Essex coast and inland along river stretches.		
Air quality	There have been general reductions on the average energy consumption on roads in the area. Similar reductions are apparent on	There is a need to allocate strategic development in such a way that air quality issues in Colchester are not exacerbated. Without a strategic approach across the HMA, it is	13) To improve air quality

Local Plans and Programmes	Description / Supporting Evidence	State of environment in absence of the Strategic Section One for Local Plans	Sustainability Objective (SO)
	the majority of roads throughout all authorities with the exception of minor roads in Colchester.	possible that the Borough Council would be prompted to allocate less suitable land, or a number of urban extensions to the main town of Colchester, to meet their borough-wide needs as stated in the OAN Report.	
AQMAs	There are a large number of AQMAs in the town of Colchester.	A plan-led approach over the wider strategic area ensures that housing and employment needs can be met in more suitable areas as opposed to any concentration / expansion of towns at higher densities which could exacerbate air quality issues.	
AONB pressures	There is one AONB, Dedham Vale, which lies on the border of Suffolk and Essex in Colchester Borough covering an area of 90 sq. km. It has been designated such because it is an exceptional example of a lowland river valley and plans are being explored to extend this designation westward.	It is unlikely that there would be any significant difference in conditions without the implementation of the Section One.	14) To conserve and enhance the quality of landscapes
Agricultural land and soil quality	There are significant areas of Grade 1 agricultural land within Tendring, and smaller areas within Colchester Borough.	It is unlikely that there would be any significant difference in conditions without the implementation of the Section One.	15) To safeguard and enhance the quality of soil and mineral deposits
Preserving mineral deposits	The area has extensive deposits of sand and gravel. The sand and gravel resources in Essex are significant in national, sub-national and local terms -	It is unlikely that there would be any significant difference in conditions without the implementation of the Section One.	

Local Plans and Programmes	Description / Supporting Evidence	State of environment in absence of the Strategic Section One for Local Plans	Sustainability Objective (SO)
	Essex is one of the largest producers in the UK; most geographically extensive and significantly mixed within the centre and north of Essex – namely the districts of Uttlesford, Braintree, Chelmsford, Colchester and Tendring.		

4. The Approach to Assessing Section One

4.1 Introduction

As previously set out, the strategic Section One for Local Plans is intended to form part of each of the authorities' separate Local Plan, with the main purpose of covering the strategic Local Plan requirements of:

- Articulating a spatial portrait of the area, including its main settlements and strategic infrastructure, as a framework for accommodating future planned growth;
- Setting out the numbers of additional homes and jobs across the area that will be needed covering the plan period to 2033;
- Providing a strategic vision for how planned growth in north Essex will be realised;
- Setting strategic objectives and policies for key growth topics; and
- Highlighting the key strategic growth locations across the area and the necessary new or upgraded infrastructure to support this growth.

The SA, in line with the scope of the Strategic Section One for Local Plans, is required to assess the impacts of the three authorities' strategic content. For this purpose, and as required of SA, a broad sustainability framework relevant to the geographical scope of the three authorities has been devised. In addition, and again relevant to the key sustainability issues of the three authorities, a site assessment framework has been developed for the purpose of assessing the sustainability of Garden Community options in the whole area on a quantitative and comparable basis and crucially to the same level of detail.

The sustainability frameworks contained in this report form the basis of the methods used to evaluate the effects of the Section One for Local Plans. Quantitative analysis is used where available, however the broad scope of the Section One and differing level of detail available for all options explored, lead to a number of assumptions being required in order to make qualitative and comparable judgements. It is important that a level playing field is ensured for the assessment of options, with the same level of information being used to assess all option. Assumptions are set out in the relevant sections of this SA in which specific elements of the Section One are appraised.

The methodology adopted for the SA of the Strategic Section One for Local Plans represents an amalgamation of the work undertaken for each authority's Local Plan Sustainability Appraisal Scoping Report, all of which have been subject to formal consultation as per the requirements of the SEA Regulations. This work has also been factored into formulating an appraisal framework for assessing Garden Community options and alternatives.

4.2 An Overview of the Three Authorities Local Plan SA Sustainability Objectives

Work has been undertaken by the North Essex Authorities and ECC in selecting suitable strategic or large scale development sites in conjunction with the site assessment criteria / frameworks of each authority's SA. This work identified the Sustainability Objectives of each authority's Local Plan SA and sought to develop a common framework for the purpose of assessing cross-boundary Garden Community options across Braintree, Colchester and Tendring.

In response to the emergence of a Strategic Section One for Local Plans, it is considered that this work, and the principle of amalgamating the SA methodologies of the three authorities, is highly relevant for assessing all strategic elements of the three authorities' Local Plans. The development of each authority's Local Plan SA methodologies have been developed initially with such an alignment in mind, in order to effectively assess any cross-boundary sites and themes across the Housing Market Area (HMA). The following table summarises the three authorities' respective Local Plan SA Framework Objectives.

Table 4: Sustainability Objectives for the Three Authorities Local Plan SAs

Braintree District Council	Colchester Borough Council	Tendring District Council
1. Safe environments/ quality of life/community cohesion	1.Decent/Affordable Homes	1.Decent/affordable homes
2.Decent homes	2.Sustainable location/efficient use of land	2.Harness the District's economic strengths
3.Improve health/reduce health inequalities	3. Prosperous economy – opportunities for jobs/vitality of centres	3.Skills base/learning opportunities
4.Vitality & viability of centres	4.Sustainable travel behaviour	4.Sustainable travel/international gateways
5.Levels of prosperity & economic growth	5.Resilient communities/better economic & social outcomes	5.Wellbeing through community cohesion & social capital
6.Biological & geological diversity	6.Reduce inequalities in health/safety by community cohesion	6.Reduce levels of poverty & exclusion
7.Sustainable transport choices & uptake	7.Conservation/townscape/ heritage assets	7.Reduce contributions to climate change

Braintree District Council	Colchester Borough Council	Tendring District Council
8. Accessibility & transport infrastructure	8.Natural environment/ biodiversity	8.Natural and historic assets
9. Education & skills	9.Efficient use of energy/reduce/reuse/recycle	9.Prudent use of natural resources
10. Cultural heritage	10.Reduce contributions to climate change	
11.Reduce climate change		
12. Water quality & address water scarcity/sewerage capacity		
13. Reduce flood risk		
14.Improve air quality		
15. Maintain/enhance landscape/townscape quality		
16.Safeguard/enhance soil quality		

It is considered that there is sufficient overlap between the three authorities' Local Plan SA Objectives so as to create a single framework that would be applicable and relevant to the wider area. Despite this, it is felt necessary to create two frameworks to assess different elements / content of the Strategic Section One for Local Plans. Whereas the Objectives above reflect the topics required of sustainability appraisal in line with the requirements of Local Plans as set out in the NPPF, there is a need to ensure that issues of local distinctiveness are captured. With that in mind, two separate frameworks have been formulated: one to assess content relevant to the policy content of the Section One, providing a strategic vision for planned growth and strategic objective, and another to reflect Garden Community options in line with more locally distinctive pressures in specific locations.

4.3 Developing a Common Sustainability Framework for Assessing Options: Policy Content

The following framework sets out the amalgamation of each authority's Local Plan SA framework for the assessment of options regarding housing and employment growth, a strategic vision, common strategic objectives and other policy content.

Table 5: Sustainability Framework for Assessing Policy Content

SA Objective	SA Criteria	Potential Indicators
1. Create safe environments which improve quality of life, community cohesion	<ul style="list-style-type: none"> - Does it seek to improve / supply community facilities for young people? - Does it seek to increase cultural activities or suitable development to stimulate them? - Does it seek to support cultural identity and social inclusion? - Will there be measures to increase the safety and security of new development and public realm? 	<ul style="list-style-type: none"> - All crime – number of crimes per 1000 residents per annum - Number of new community facilities granted planning permission - Number of new cultural facilities granted planning permission, including places of worship
2. To ensure that everyone has the opportunity to live in a decent, safe home which meets their needs at a price they can afford	<ul style="list-style-type: none"> - Will it increase the range and affordability of housing to support the growing population and for all social groups? - Does it respond to the needs of an ageing population? - Does it seek to provide appropriate rural affordable housing? - Will it deliver well designed and sustainable housing? - Will it contribute to meeting Gypsy and Traveller pitch requirements of the GTAA? 	<ul style="list-style-type: none"> - The number of net additional dwellings - Affordable housing completions - Number of zero-carbon homes completed - Number of additional Gypsy and Traveller pitches - Number of starter homes completed - Number of homes for older people completed
3. Improve health/reduce health inequalities	<ul style="list-style-type: none"> - Will it ensure access to health facilities? - Will it ensure access to sport and recreation facilities, open space and 	<ul style="list-style-type: none"> - Percentage of new residential development within 30mins of public transport time of a GP or hospital - Percentage of new residential development that adheres to

SA Objective	SA Criteria	Potential Indicators
	<p>accessible green space?</p> <ul style="list-style-type: none"> - Will it encourage access by walking or cycling? 	<p>Natural England's Accessible Natural Greenspace Standards</p> <ul style="list-style-type: none"> - Percentage of new residential development within walking and cycling distance to schools - Percentage of new residential development within walking and cycling distance to sport and recreation facilities / open space
4. To ensure and improve the vitality & viability of centres	<ul style="list-style-type: none"> - Does it seek to prevent loss of retail and other services in rural areas? - Does it promote and enhance the viability of existing centres by focusing development in such centres? - Does it seek to locate development in close proximity to town centres? - Does it seek to located development within easy public travelling distance to town centres? - Does it seek to improve public transport networks to town centres? 	<ul style="list-style-type: none"> - Amount of completed retail, office and leisure development delivered (and in centres) - Amount of completed retail, office and leisure development across the three authority area
5. To achieve a prosperous and sustainable economy that creates new jobs, improves the vitality and viability of centres and captures the economic benefits of international gateways	<ul style="list-style-type: none"> - Will it improve the delivery of a range of employment opportunities to support the growing population? - Will it tackle employment associated deprivation? - Will it enhance the area's potential for tourism? - Will it promote development of the ports? - Will it encourage the rural economy and diversification of it? - Will it support business innovation, diversification, entrepreneurship and changing economies? - Does it seek to improve existing training and learning facilities and/or create more facilities? 	<ul style="list-style-type: none"> - Amount of floor space developed for employment, sqm - Successful employment use applications in rural areas - Number of jobs created in the ports - Number of developments approved associated with the tourism sector - Level 2 qualifications by working age residents. - Level 4 qualifications and above by working age residents. - Employment status of residents. - Average gross weekly earnings. - Standard Occupational Classification.

SA Objective	SA Criteria	Potential Indicators
	<ul style="list-style-type: none"> - Will the employment opportunities available be mixed to suit a varied employment skills base? 	
6. To value, conserve and enhance the natural environment, natural resources, biodiversity and geological diversity	<ul style="list-style-type: none"> - Will development have a potential impact on a national, international or European designated site (SPA, SAC, Ramsar, SSSI)? - Will it maintain and enhance sites otherwise designated for their nature conservation interest? - Will it conserve and enhance natural/semi natural habitats? - Will it conserve and enhance species diversity, and in particular avoid harm to indigenous BAP priority species? 	<ul style="list-style-type: none"> - Impacts (direct and indirect) on designated sites - Amount of development in designated areas - Area of land offset for biodiversity
7. To achieve more sustainable travel behaviour, reduce the need to travel and reduce congestion	<ul style="list-style-type: none"> - Will it increase and/or improve the availability and usability of sustainable transport modes? - Will it seek to encourage people to use alternative modes of transportation other than private vehicle? - Will it lead to the integration of transport modes? - Will it improve rural public transport? - Does it seek to increase the uptake or viability of walking and cycling as methods of transportation, through new infrastructure or integration? 	<ul style="list-style-type: none"> - Percentage of journeys to work by walking and cycling and percentage of journeys to work by public transport
8. To promote accessibility, ensure that development is located sustainably and makes efficient use of land, and ensure the necessary infrastructure to support new development	<ul style="list-style-type: none"> - Will it contribute positively to reduce social exclusion by ensuring access to jobs, shopping, services and leisure facilities for all? - Does it seek to concentrate development and facilities where access via sustainable travel is greatest? - Does it seek to minimise congestion 	<ul style="list-style-type: none"> - Number / amount of new homes / employment development completed at ward level within Growth / Regeneration Areas - Percentage of new development within 30 minutes of community facilities (as defined by each authority) - Percentage of new residential

SA Objective	SA Criteria	Potential Indicators
	<p>at key destinations / areas that witness a large amount of vehicle movements at peak times?</p> <ul style="list-style-type: none"> - Would the scale of development require significant supporting transport infrastructure in an area of identified need? - Will it ensure adequate school places (through expansion / new facilities) and early years provision to support growth? - Will it ensure the required improvements to utilities infrastructure? - Will it ensure the required improvements in capacity to GP services? - Will it provide a suitable amount of sports, recreational, leisure and open space facilities? 	<p>development within 30 minutes of public transport time of a GP, hospital, primary and secondary school, employment and a major retail centre</p> <ul style="list-style-type: none"> - Additional capacity of local schools / incidents of new school applications
<p>9. To conserve and enhance historic and cultural heritage and assets and townscape character?</p>	<ul style="list-style-type: none"> - Will it protect and enhance designations, features and areas of historical, archaeological and cultural value in both urban and rural areas? - Will it have a negative impact on the significance of a designated historic environment asset or its setting? - Does it seek to enhance the range and quality of the public realm and open spaces? - Will it reduce the amount of derelict, degraded and underused land? - Does it encourage the use of high quality design principles to respect local character? - Will / can any perceived adverse impacts be reduced through adequate mitigation? 	<ul style="list-style-type: none"> - Percentage of new and converted dwellings on previously developed land - Number of listed buildings demolished, repaired or brought back to use, including locally listed buildings - New Conservation Area Appraisals adopted - Number of Listed Buildings, Scheduled Monuments, Conservation Areas, Registered Parks and Gardens (and percentage at risk) - Area of highly sensitive historic landscape characterisation type(s) which have been altered and their character eroded - Number of major development projects that enhance or detract

SA Objective	SA Criteria	Potential Indicators
		<p>from the significance of heritage assets or historic landscape character</p> <ul style="list-style-type: none"> - Percentage of planning applications where archaeological investigations were required prior to approval or mitigation strategies developed or implemented
10. To make efficient use of energy and reduce contributions to climatic change through mitigation and adaptation.	<ul style="list-style-type: none"> - Will it reduce emissions of greenhouse gases by reducing energy consumption? - Will it lead to an increased generation of energy from renewable sources? - Will it encourage greater energy efficiency? - Will it improve the efficient use of natural resources, minimising waste and promoting recycling? 	<ul style="list-style-type: none"> - Total CO2 emissions - Renewable Energy Installed by Type - Number of zero carbon homes delivered
11. To improve water quality and address water scarcity and sewerage capacity	<ul style="list-style-type: none"> - Will it lead to no deterioration on the quality of water bodies? - Will water resources and sewerage capacity be able to accommodate growth? 	<ul style="list-style-type: none"> - Quality of Rivers (number achieving ecological good status) - Number of planning permissions granted contrary to the advice of the Environment Agency on grounds of water quality
12. To reduce the risk of fluvial, coastal and surface water flooding	<ul style="list-style-type: none"> - Does it promote the inclusion of Sustainable Drainage Systems (SuDS) in new developments and will their integration be viable? - Does it seek to avoid development in areas at risk of flooding (fluvial, coastal, surface water)? - Does it seek to avoid increasing flood risk (fluvial, surface water, groundwater) in areas away from initial development? 	<ul style="list-style-type: none"> - Number of planning permissions granted contrary to the advice of the Environment Agency on flood defence grounds - Number of SuDS schemes approved by ECC
13. To improve air quality	<ul style="list-style-type: none"> - Will it improve, or not detrimentally affect air quality along the A12 or A120? 	<ul style="list-style-type: none"> - Number of Air Quality Management Areas

SA Objective	SA Criteria	Potential Indicators
	<ul style="list-style-type: none"> - Does it direct growth away from AQMAs? - Does it seek to improve or avoid increasing traffic flows generally? 	
14. To conserve and enhance the quality of landscapes	<ul style="list-style-type: none"> - Will landscapes sensitive to development be protected? - Will it lead to rural expansion or development outside development boundaries/limits that increases coalescence with neighbouring settlements? - Is the scale / density of development in keeping with important and valued features of the local landscape? 	<ul style="list-style-type: none"> - Percentage of new and converted dwellings on previously developed land - Number of proposals permitted within areas noted for their high landscape value - Number of proposals permitted contrary to a desire to restrict coalescence
15. To safeguard and enhance the quality of soil and mineral deposits?	<ul style="list-style-type: none"> - Will it avoid the loss of high quality agricultural land? - Will it avoid the sterilisation of mineral deposits / is the site within a Minerals Safeguarding Area (MSA)? - Will it support or lead to the remediation of contaminated land, avoiding environmental pollution or exposure of occupiers or neighbouring land uses to unacceptable health risk? 	<ul style="list-style-type: none"> - Percentage of new development on high quality agricultural land (ALC) - Number of developments proposed within MSAs - Contaminated land brought back into beneficial use, hectares

4.4 The Appraisal of Policy Content

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

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

Table 6: Impact on Sustainability Objectives

	Sustainability Objectives (SO)														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Short Term															
Medium Term															
Long Term															

The content to be included within the table responds to those 'significant effects' of the policy or element of the Strategic Section One for Local Plans subject to appraisal. Appraisals will also look at the following:

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

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

4.4.1 Description of 'Significant Effects'

The strength of impacts can vary dependant on the relevance of the policy content to certain sustainability objectives or themes. Where the policies have been appraised against the Sustainability Objectives the basis for making judgements within the assessment is identified within the following key:

Possible impact	Basis for judgement
++	Strong prospect of there being significant positive impacts
+	Strong prospect of there being minor positive impacts
?	Possibility of either positive or negative impacts, or general uncertainty where there is a lack on current information (to be elaborated in commentary in each instance)
0	No impact
N/A	Not applicable to the scope or context of the appraised content
-	Strong prospect of there being minor negative impacts and mitigation would be possible
--	Strong prospect of there being significant negative impacts with mitigation unlikely to be possible (pending further investigation)

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

4.4.2 Description of 'Temporal Effects'

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

(S) Short term: early stages of the plan period.

(M) Medium Term: middle stages of the plan period.

(L) Long term: latter stages of the plan period (2033) and where relevant beyond

4.4.3 Description of 'Secondary, Cumulative and Synergistic Effects'

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

4.4.4 Description of 'Alternatives Considered'

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

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

4.4.5 Description of 'Proposed Mitigation Measures / Recommendations'

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

4.5 Developing a Common Framework for Assessing Options: Garden Communities

Paragraph 179 of the NPPF sets out that Local Planning Authorities should work collaboratively with other bodies to ensure that strategic priorities across local boundaries are properly coordinated and clearly reflected in individual Local Plans. Joint working should enable local planning authorities to work together to meet development requirements which cannot wholly be met within their own areas – for instance, because of a lack of physical capacity or because to do so would cause significant harm to the principles and policies of the NPPF. As part of this process, they should consider producing joint planning policies on strategic matters and informal strategies such as joint infrastructure and investment plans.

In view of this, this SA covers the strategic area of Braintree, Colchester and Tendring Councils. As distinct areas in their own right, the SA has to reflect the individual characteristics of the three LPAs, being both broad enough to be relevant to the whole strategic area, yet also detailed enough to respond to the key characteristics, and sustainability issues of each LPA including smaller areas within each authority.

The following framework sets out the amalgamation of each authority's Local Plan SA Site Assessment Framework with the additional incorporation of TCPA Garden City Principles for the assessment of options regarding Garden Communities. It has been developed in conjunction with the Local Plan SA Objectives from each authority. The framework shows each amalgamated objective in turn alongside corresponding relevant TCPA Garden City Principles and any other considerations required. This framework has been developed in order to capture each principle of a successful Garden City, with evidence of local considerations in the area of the three authorities.

The basis for making judgements within the assessment of Garden Communities is identified within the following key:

Possible impact	Basis for judgement
++	Strong prospect of fully meeting criteria with significant wider benefits
+	Reasonable prospect of fully meeting criteria
?/-/+	Reasonable prospect of partially meeting criteria / uncertainty / mix of positive and negative impacts
-	Unlikely to fully meet criteria however mitigation possible regarding impacts
--	Unlikely to meet criteria without significant negative impacts (pending further detailed investigation regarding mitigation)

The appraisal of Garden Community options have been assessed on a largely qualitative basis in line with the strategic nature of each option and the level of information available for each option at the present time. With this in mind, this SA is intended to be a high level tool to assist the relevant authorities in the selection of Garden Communities across the wider area including the scale of communities in the chosen locations.

It should also be noted that in the appraisal of options, judgements have been made in line with the eventual scope and scale of each proposal. To that effect, what would constitute a significant constraint for a smaller or non-strategic site may represent a significant opportunity at the scale of an effective Garden Community. This is particularly relevant for infrastructure requirements and it should be acknowledged that Garden Communities can often meet the necessary thresholds to deliver and stimulate infrastructure provision to the benefit of the new and wider existing communities.

In addition to the individual appraisal of the Garden Community options, commentary will be included that explores various broad cumulative impacts within the scope of the Strategic Section One for Local Plans document, and also any other strategic issues in the wider area.

Table 7: Framework for Assessing Garden Community Options

Objective	Corresponding Garden City Principle(s) and any additional considerations	Relevant Local Plan SA Objectives (from each authority)
1. Physical Limitations – Absence of insurmountable problems (e.g. access, ground conditions, flood risk, hazardous risks, pollution, contamination and air quality)	<ul style="list-style-type: none"> - Absence of insurmountable problems (ground conditions, flood risk, hazardous risks, pollution, contamination and air quality) - Incorporation of SuDS. 	(Adapted from NPPG, BDC SA Objectives 13 & 14)

Objective	Corresponding Garden City Principle(s) and any additional considerations	Relevant Local Plan SA Objectives (from each authority)
2. Impacts – Acceptable impacts on high quality agricultural land, important landscape features, townscape features, sites of nature conservation interest and heritage assets	<ul style="list-style-type: none"> - Reflect a fusion of the best of the past while embracing new materials and the needs of modern living - Acceptable impacts only on sites of nature conservation interest. - A surrounding belt of countryside to prevent sprawl, well connected and biodiversity rich public parks, and a mix of public and private networks of well-managed, high-quality gardens, tree-lined streets and open spaces. - Acceptable impacts only on high quality agricultural land, important landscape features. 	(Adapted from NPPG, BDC SA Objectives 6, 10, 15 & 16 CBC SA Objectives 7 & 8, TDC SA Objective 8)
3. Environment/Amenity – Acceptable relationship with and impact on occupiers of existing properties and neighbouring areas/towns (maintaining adequate separation)	<ul style="list-style-type: none"> - Acceptable relationship only with and impact on occupiers of existing properties and neighbouring areas / towns (maintaining adequate separation) 	(Adapted from NPPG)
4. Transport – Incorporation of integrated and accessible sustainable transport systems, with walking, cycling and public transport designed to be the most attractive forms of local transport	<ul style="list-style-type: none"> - New Garden Cities should be located only where there are existing rapid public transport links to major cities, or where real plans are already in place for its provision. - Walking, cycling and public transport should be the most attractive and prioritised forms of transport in the garden city. - Ensure a comprehensive and safe network of footpaths and 	(Adapted GCP9, BDC SA Objectives 7 & 8, CBC SA Objective 4, TDC SA Objective 4).

Objective	Corresponding Garden City Principle(s) and any additional considerations	Relevant Local Plan SA Objectives (from each authority)
	<p>cycleways throughout the development, and public transport nodes within a short walking distance of all homes.</p> <ul style="list-style-type: none"> - Where car travel is necessary, consideration should be made of shared transport approaches such as car clubs. 	
5. Resilience - Positive contribution towards maintaining resilient town centres and identified regeneration and development priority areas and institutions (including Essex University)	<ul style="list-style-type: none"> - Positive contribution towards town centres. - Positive contribution towards identified regeneration priority areas and institutions 	(Adapted NPPG, BDC SA Objectives 4 & 5, CBC SA Objective 3).
6. Housing – Provision of a mix of tenures, including affordable homes and a range of housing types (including self-build/custom build and gypsy and traveller pitches).	<ul style="list-style-type: none"> - Garden Cities (should be) part of a wider strategic approach to meeting the nation's housing needs. - An appropriate number of homes in a new Garden City must be 'affordable' for ordinary people. - Provide mixed-tenure homes and housing types that are genuinely affordable for everyone - An appropriate percentage of the homes that are classified as 'affordable' must be for social rent. - Consider life-time homes and the needs of particular social groups, such as the elderly. - A range of housing types including self-build / custom 	(Adapted GCP4, BDC SA Objective 2, CBC SA Objective 1, TDC SA Objective 1).

Objective	Corresponding Garden City Principle(s) and any additional considerations	Relevant Local Plan SA Objectives (from each authority)
	build and gypsy and traveller pitches <ul style="list-style-type: none"> - Aspire to the very best domestic and commercial architecture with sensitivity to local vernacular design and materials. - New Garden Cities should include opportunities for people to build their own home (either alone or collectively), and set aside land for future community needs. 	
7. Employment Opportunities – Provision for a wide range of local jobs within easy commuting distance from homes	<ul style="list-style-type: none"> - New Garden Cities must provide a full range of employment opportunities, with the aim of no less than one job per new household being easily accessible - There should be a robust range of employment opportunities in the Garden City itself, with a variety of jobs within easy commuting distance of homes. 	(GCP5, CBC SA Objective 3, TDC SA Objective 2).
8. Mixed-use Opportunities – Inclusion of cultural, recreational and shopping facilities in walkable, vibrant, sociable neighbourhoods.	<ul style="list-style-type: none"> - Inclusion of cultural, recreational and shopping facilities in walkable, vibrant, sociable neighbourhoods 	(GCP8).
9. Environmental Quality & Sustainability – Incorporation of generous areas of publicly accessible open space, allotments/food production areas, biodiversity gains, SUDS and zero-carbon/energy-positive	<ul style="list-style-type: none"> - Create shared spaces for social interaction and space for both formal and informal artistic activities, as well as sport and leisure activities. - Strong emphasis should be placed on homes with gardens and on space for both 	(Adapted GCP7, BDC SA Objective 11, CBC SA Objectives 9 & 10, TDC SA Objective 7).

Objective	Corresponding Garden City Principle(s) and any additional considerations	Relevant Local Plan SA Objectives (from each authority)
<p>technology to ensure climate resilience.</p>	<p>allotments and community gardens and orchards to provide for healthy local food.</p> <ul style="list-style-type: none"> - Garden Cities are places of cultural diversity and vibrancy with design contributing to sociable neighbourhoods. This means, for example, shaping design with the needs of children's play, teenage interests and the aspirations of elderly in mind. - Net gain to biodiversity is secured through master plans which link generous private and community gardens with wider public green and blue space and ultimately with strategic networks of green infrastructure and habitat creation. - Garden Cities must demonstrate the highest standards of technological innovation in zero carbon and energy positive technology to reduce the impact of climate emissions. - In building standards, a requirement for innovation beyond zero carbon and in the use of materials and construction techniques. 	
<p>10. Developability / Deliverability - The growth area is available, commercially attractive, and capable of delivering necessary physical/social/green infrastructure and could be viably developed within</p>	<ul style="list-style-type: none"> - Ensure that the development can self-fund infrastructure costs - Be commercially attractive with strong market conditions and value potential - Availability of land being put forward for development with active landowner/developer 	<p>(NPPF, NPPG, GCP1, GCP3, BDC SA Objective 12, CBC SA Objective 6, TDC SA Objective 5).</p>

Objective	Corresponding Garden City Principle(s) and any additional considerations	Relevant Local Plan SA Objectives (from each authority)
<p>[6-10] years.</p> <p>Satisfactory mechanisms are in place to capture increase in land value to meet infrastructure costs and manage and maintain assets in the long term</p>	<p>interest</p> <ul style="list-style-type: none"> - Scope for delivery structures through active and positive public and private sector engagement 	

5. The Appraisal of the Section One Policies including Reasonable Alternatives

5.1 Introduction

The following sub-sections respond to the appraisal of each element of the Strategic Section One for Local Plans. This responds to an appraisal of each policy within the document. In each sub-section, an appraisal of all identified reasonable alternatives has been included for transparency and robustness. The process behind the identification of each alternative has been included, citing the source of each alternative in each instance. The following elements of the Strategic Section One for Local Plans are subject to assessment in this Sustainability Appraisal:

- Vision for the Strategic Area
- Strategic Objectives
- Policy SP1 – Presumption in Favour of Sustainable Development
- Policy SP2 – Spatial Strategy for North Essex
- Policy SP3 – Meeting Housing Needs
- Policy SP4 – Providing for Employment and Retail
- Policy SP5 – Infrastructure and Connectivity
- Policy SP6 – Place Shaping Principles
- Policy SP7 – Development and Delivery of New Garden Communities in Essex
- Policy SP8 – Tendring / Colchester Borders Garden Community
- Policy SP9 – Colchester / Braintree Garden Community
- Policy SP10 – West of Braintree Garden Community

The appraisal of Garden Community Options is contained within Appendix 1 of this report.

5.2 Vision for the Strategic Area

5.2.1 Context / Justification

It is important that addressing growth at any spatial scale is founded on a clear vision of how and where change should occur. The vision for North Essex sets this out at a strategic level and provides a context for the more detailed vision for the growth of each individual authority's area.

The Vision has been identified as how the Strategic Area would like progress over a 15 year plan period to 2033. The National Planning Policy Framework expects local authorities to set out the strategic priorities for the area in the Local Plan, addressing:

- the homes and jobs needed in the area
- the provision of infrastructure for transport and telecommunications
- the provision of education, health, community and cultural infrastructure, and
- conservation and enhancement of the natural and historic environment, including landscape

The Vision for the Strategic Area is as follows:

Vision for the Strategic Area

North Essex will be an area of significant growth over the period to 2033 and beyond, embracing positively the need to build well-designed new homes, create jobs and improve and develop infrastructure for the benefit of existing and new communities.

Sustainable development principles will be at the core of the strategic area's response to its growth needs, balancing social, economic and environmental issues. Green and blue infrastructure and new and expanded education and health care facilities will be planned and provided along with other facilities to support the development of substantial new growth; while the countryside and heritage assets will be protected and enhanced.

At the heart of our strategic vision for North Essex are new garden communities, the delivery of which is based on Garden City Principles covered by Policy SP7. The garden communities will attract residents and businesses who value innovation, community cohesion and a high quality environment, and who will be provided with opportunities to take an active role in managing the garden community to ensure its continuing success.

Residents will live in high quality, innovatively designed, contemporary homes, accommodating a variety of needs and aspirations, located in well-designed neighbourhoods where they can meet their day-to-day needs. There will be a network of tree-lined streets and green spaces, incorporating and enhancing existing landscape features and also accommodating safe and attractive routes and space for sustainable drainage solutions; and leisure and recreation opportunities for both residents and visitors of the garden communities.

Suitable models for the long term stewardship of community assets will be established and funded to provide long term management and governance of assets. All Garden City

principles as specified in the North Essex Garden Communities Charter will be positively embraced including new approaches to delivery and partnership working and sharing of risk and reward for the benefit of the new communities.

5.2.2 Significant and Temporal Effects

Table 8: Impact on Sustainability Objectives: Vision for the Strategic Area

Temporal Impacts	Sustainability Objectives (SO)														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Short	N/A	+	+	N/A	+	+	?	N/A	+	N/A	N/A	N/A	N/A	N/A	N/A
Medium	N/A	+	+	N/A	+	+	?	N/A	+	N/A	N/A	N/A	N/A	N/A	N/A
Long	N/A	++	++	N/A	++	++	++	N/A	++	N/A	N/A	N/A	N/A	N/A	N/A

The strategic vision for the area will have short and medium term positive impacts on housing and employment related Sustainability Objectives (SO2 and SO5 respectively). The significance of these impacts will increase in the long term with the principle of sustainable Garden Communities being developed as part of a sustainable strategy for growth and in response to objectively assessed housing and employment needs, and also their wider benefits. This will also be the case for health (SO3), the natural environment (SO5), and the historic environment (SO9) through the provision of green infrastructure, new and expanded education and health care facilities and recreational land and also the protection and enhancement of countryside and heritage assets.

There will additionally be significant long term impacts on ensuring the necessary transport infrastructure to support new development (SO7) in line with the emergence of the Garden Communities in the latter stages of the three authorities' Local Plan periods. There will be an uncertainty in the short and medium term regarding these impacts, where it is unclear at this stage whether the transport and connectivity improvements associated with the A120 re-routing will be suitably aligned to the initial phases of the Garden Communities; this is not a criticism of the Vision however, which need not be explicit of such details at such an early stage of a long and detailed process.

It should be noted that the specific Garden Community options highlighted have not been subject to appraisal as part of the Vision; these and reasonable alternatives are appraised within their own context as land allocations within a specific section of this SA. As such, there will be no assessed impact on a large amount of the Sustainability Objectives relevant to more site or policy specific considerations as these are subject to more focused assessment within the appraisal of the specific Garden Communities themselves.

5.2.3 Secondary Effects

The emergence of Garden Communities within the three authorities' area can be expected to have further significant secondary effects on the wider area, associated with the necessary infrastructure provision required of development at that scale. Garden Communities, in line with and in conformity to TCPA Garden City Principles, ensure that the sustainability effects resulting from strategic level growth are maximised for the benefit of new and existing communities.

5.2.4 Alternatives Considered

The Vision can be seen as a general summary of the content of the Strategic Section One for Local Plans. As such, the Vision as written was selected. The individual elements of the Vision are elaborated on in more detail within other policies of the document. Alternatives are explored in more detail within the assessment of these policies later within this SA, commensurate to their individual context.

5.2.5 Proposed Mitigation Measures / Recommendations

No mitigation measures or recommendations are proposed at this stage.

5.3 Strategic Objectives

5.3.1 Context / Justification

The following strategic objectives are designed to support the vision for the area and provide a basis for the development of strategic topic-based policies that will help in achieving the vision.

The appraisal of the strategic objectives explores whether the objectives are compatible with those objectives formulated for the Sustainability Appraisal. This has involved a compatibility matrix, which looks to see whether the Sustainability Objectives are met, with the overall purpose of ensuring that the Strategic Area's key sustainability issues are adequately covered with a mind to their resolution where possible.

The Strategic Objectives for the Strategic Area are as follows:

Strategic Objectives

- **Providing Sufficient New Homes** – to provide for a level and quality of new homes to meet the needs of a growing and ageing population in North Essex; to achieve this by ensuring the availability of developable land in appropriate locations and that the market delivers a suitable mix of housing types and tenures.
- **Fostering Economic Development** – to strengthen and diversify local economies to provide more jobs; and to achieve a better balance between the location of jobs and housing, which will reduce the need to travel and promote sustainable growth.
- **Providing New and Improved Transport & Communication Infrastructure** – to make efficient use of existing transport infrastructure and to ensure sustainable transport opportunities are promoted in all new development. Where additional capacity is required in the form of new or upgraded transport infrastructure to support new development, ensuring that this is delivered in a phased & timely way to minimise the impact of new development. To ensure that enabled communication is provided as part of new developments as enabled communication is essential for modern living and broadband infrastructure and related services will be critical for business, education and residential properties.
- **Addressing Education and Healthcare Needs** – to provide good quality educational opportunities as part of a sustainable growth strategy, including practical vocational training and apprenticeships linked to local job opportunities. To work with partners in the NHS, Public Health and local health partnerships to ensure adequate provision of healthcare facilities to support new and growing communities.
- **Ensuring High Quality Outcomes** – to promote greater ambition in planning and delivering high-quality sustainable new communities. Overall, new development must secure high standards of urban design and green infrastructure which creates attractive and sustainable places where people want to live and spend time.

5.3.2 Significant and Temporal Effects

Table 9: Impact on Sustainability Objectives: Strategic Objectives

Sustainability Objectives	Strategic Objective				
	Providing Sufficient New Homes	Fostering Economic Development	Providing New and Improved Transport & Communication Infrastructure	Addressing Education and Healthcare Needs	Ensuring High Quality Outcomes
1.Safe Environments	N/A	N/A	N/A	N/A	+
2. Decent homes	++	N/A	N/A	N/A	N/A
3. Health inequalities	N/A	N/A	N/A	++	N/A
4. Vitality & Viability of centres	N/A	+	+	N/A	N/A
5. Sustainable employment	N/A	++	+	+	N/A
6. Natural environment	N/A	N/A	N/A	N/A	N/A
7. Sustainable travel	+	+	++	N/A	N/A
8. Accessibility / infrastructure	+	+	++	++	N/A
9. Historic environment	N/A	N/A	N/A	N/A	+
10. Climate change	N/A	N/A	N/A	N/A	+
11. Water / sewerage	N/A	N/A	N/A	N/A	N/A
12. Flood risk	N/A	N/A	N/A	N/A	N/A
13. Air quality	N/A	N/A	N/A	N/A	N/A

Sustainability Objectives	Strategic Objective				
	Providing Sufficient New Homes	Fostering Economic Development	Providing New and Improved Transport & Communication Infrastructure	Addressing Education and Healthcare Needs	Ensuring High Quality Outcomes
14. Landscape quality	N/A	N/A	N/A	N/A	N/A
15. Soil and minerals	N/A	N/A	N/A	N/A	N/A

A number of significant positive impacts have been assessed as forthcoming on Sustainability Objectives related to sustainable housing and employment provision (SO2 and SO5), health (SO3), sustainable travel (SO7), and transport infrastructure (SO8). These impacts can be expected to be experienced in the short to long term.

The Strategic Section One for Local Plans' Strategic Objectives could be perceived to not fulfil the aspirations of a considerable proportion of the Sustainability Objectives devised for the document's appraisal, however it should be acknowledged that the document is strategic in nature and in that regard is focused specifically on those areas of sustainability that are best addressed at a strategic level. Those Sustainability Objectives not addressed by the Strategic Objectives can be deemed as more relevant to the content and context of each of the three authorities' Section Two Local Plans.

5.3.3 Secondary Effects

For the purposes of exploring the compatibility of the Strategic and Sustainability Objectives, secondary impacts have been highlighted as minor positive impacts. These can be seen as additional expected benefits emanating from the successful delivery of strategic outcomes. Positive secondary impacts have been assessed as forthcoming regarding community cohesion (SO1), the vitality and viability of town centres (SO4), sustainable travel and accessibility (SO6 and SO7), townscape (SO9) and climate change adaptation (SO10).

5.3.4 Alternatives Considered

Similar to the Vision, the Strategic Objectives can be seen as a general summary of the content of the Strategic Section One for Local Plans. The Strategic Objectives reflect those of the strategic area and the requirements of local plans as espoused within the NPPF; as a result of this, the objectives were selected and no other alternatives can be considered reasonable. The individual elements of the Strategic Objectives are elaborated on in more detail within other policies of the document. Alternatives are explored in more detail within the assessment of these policies later within this SA, commensurate to their individual context.

5.3.5 Proposed Mitigation Measures / Recommendations

No mitigation measures or recommendations are proposed at this stage.

5.4 Policy SP1 – Presumption in Favour of Sustainable Development

5.4.1 Context / Justification

The authorities will apply a presumption in favour of sustainable development in accordance with guidance in the National Planning Policy Framework.

The policy is as follows:

Policy SP1 – Presumption in Favour of Sustainable Development

When considering development proposals the Local Planning Authorities will take a positive approach that reflects the presumption in favour of sustainable development contained in the National Planning Policy Framework. They will always work pro-actively with applicants jointly to find solutions which mean that proposals can be approved wherever possible, and to secure development that improves the economic, social and environmental conditions in the area.

Sustainable development in North Essex will demonstrably contribute to the strategic and local vision and objectives and will accord with the policies in this Local Plan (and, where relevant, with policies in neighbourhood plans). Development that complies with the Plan in this regard will be approved without delay, unless material considerations indicate otherwise.

Where there are no policies relevant to the application or relevant policies are out of date at the time of making the decision then the Council will grant permission unless material considerations indicate otherwise – taking into account whether:

- Any adverse impacts of granting permission would significantly and demonstrably outweigh the benefits, when assessed against the policies in the National Planning Policy Framework taken as a whole or**
- Specific policies in that Framework or the Plan that indicate that development should be restricted**

5.4.2 Significant and Temporal Effects

Table 10: Impact on Sustainability Objectives: Policy SP1

Temporal Impacts	Sustainability Objectives (SO)														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Short	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Medium	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Long	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

There will be positive impacts resulting from the inclusion of the wider position of, and the Strategic Section One for Local Plan's relationship with, the NPPF. Impacts are assessed as generally minor within this SA relevant to the strategic context of the document. It should be noted that enhancements of sustainability benefits and impacts are likely to be possible only within a local context and in line with local distinctiveness resulting from each of the three authorities' Section Two Local Plan policies.

5.4.3 Secondary Effects

There will be no secondary impacts arising from the implementation of this policy.

5.4.4 Alternatives Considered

Comments received during the Preferred Options consultation stage identified a possible approach that the policy insist upon an 'infrastructure first' qualification. The notion of 'infrastructure first' is established throughout the plan and included within the Section One at more relevant points. As such, no alternative approaches can be considered reasonable as the policy reiterates the thread of sustainable development as espoused in the NPPF. As such the Policy was selected. Any alternative that deviates from this approach would be contrary to NPPF and therefore an unsound approach.

5.4.5 Proposed Mitigation Measures / Recommendations

No mitigation measures or recommendations are proposed at this stage.

5.5 Policy SP2 – Spatial Strategy for North Essex

5.5.1 Context / Justification

Future growth will contribute to maintaining and enhancing a well-connected network of sustainable settlements across North Essex. New homes, jobs, retail and leisure facilities serviced by new and upgraded infrastructure will be accommodated as part of existing settlements according to their scale, sustainability and role, and by the creation of strategic scale new settlements. The countryside will be protected and enhanced. For the majority of settlements these issues are addressed in the second part of the Local Plan dealing with each authority's area. However, it is relevant here to set out the spatial strategy at an appropriate level, as it relates to the main settlements and strategic-scale new development.

- In Braintree District the growth will be mainly addressed via a mixture of urban extensions and new communities. Braintree town, as the largest service centre in the District, will have a number of new urban extensions. Over 4,000 new homes will be allocated in this area. The other main focus for development will be the A12 corridor with the main town of Witham and service villages of Hatfield Peverel, Kelvedon and Feering with allocations of over 2,000 new homes. Other parts of the District, including the town of Halstead, will have smaller allocations to reflect a more local need and make the best use of brownfield sites, recognising that these areas are not as sustainable. A new strategic scale garden community will be located to the west of Braintree, on the boundary with Uttlesford.
- In Colchester Borough, the urban area of Colchester will continue to be a focus for growth due to its pre-eminent role as a centre for jobs, services and transport, with 4,000 new homes expected to be delivered over the Local Plan period. The urban area of Colchester, however, has a limited and diminishing supply of available brownfield sites, so new communities are included in the spatial hierarchy as a sustainable option for further growth of homes and jobs, focussing on locations to the east and west of Colchester. Approximately 1,200 new homes will be allocated in the Rural District Centres of Tiptree, West Mersea and Wivenhoe. Smaller sustainable settlements will receive limited allocations proportionate to their role in the spatial hierarchy.
- In Tendring District the spatial hierarchy promotes growth in settlements that are the most accessible to the strategic road network, public transport and offer a range of services. Clacton and Harwich with Dovercourt are classified as strategic urban settlements and will accommodate around 5,000 new homes. A new cross-boundary garden community will be located in the west of the district and to the east of Colchester. The smaller urban settlements of: Frinton with Walton and Kirby Cross; Manningtree with Lawford and Mistley; and Brightlingsea; along with rural service centres including Alresford, Great Bentley and Weeley have all seen the granting of planning permissions for major housing developments since April 2013.

The above urban extensions and other housing allocations within the wider Local Plans of Colchester, Braintree and Tendring are set out within the Section Twos of the respective authorities' Plans, and their appraisal individually and cumulatively (including with allocated Garden Communities) is included within the accompanying Section Two SAs.

The assessment of Spatial Strategy options does not factor in the specific impacts of the assessed Garden Communities elsewhere in this report. The assessment of the Spatial Strategy can be seen as specifically

relevant to the notion of allocating three Garden Communities, with housing provision in each LPA area. For this purpose, the assessment of the Spatial Strategy can be inclusive of those alternative Garden Community options at Monks Wood and North Colchester. The assessment of permutations exploring different combinations of Garden Community options (including the cumulative assessment of those Garden Community locations shown on Map 3.3 of the Plan and the Proposals Map) is included elsewhere in this Report.

The policy is as follows:

Policy SP2 – Spatial Strategy for North Essex

Existing settlements will be the principal focus for additional growth across North Essex within the Local Plan period. Development will be accommodated within or adjoining settlements according to their scale, sustainability and existing role both within each individual district and, where relevant, across the wider strategic area.

Future growth will be planned to ensure settlements maintain their distinctive character and role. Re-use of previously-developed land within settlements is an important objective, although this will be assessed within the broader context of sustainable development principles, particularly to ensure that development locations are accessible by a choice of means of travel.

Each local authority will identify a hierarchy of settlements where new development will be accommodated according to the role of the settlement, sustainability, its physical capacity and local needs.

Beyond the main settlements the authorities will support diversification of the rural economy and conservation and enhancement of the natural environment.

Three new garden communities will be developed and delivered as part of the sustainable strategy for growth at the locations shown on Map 3.3 below and the Proposals Map. These new communities will provide strategic locations for at least 7,500 additional homes within the Plan period in North Essex. Employment development will also be progressed with the expectation that substantial additional housing and employment development will be delivered in each community beyond the current Local Plan periods. They will be planned and developed drawing on Garden City principles, with necessary infrastructure and facilities provided and a high quality of place-making and urban design.

5.5.2 Significant and Temporal Effects

Table 11: Impact on Sustainability Objectives: Policy SP2

Temporal Impacts	Sustainability Objectives (SO)														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Short	+	++	+	++	++	+	++	?	?	?	0	?	?	+	N/A
Medium	+	++	+	++	++	+	++	?	?	?	0	?	?	+	N/A
Long	+	++	++	++	++	?	++	++	+	?	0	?	+	?	N/A

The Spatial Strategy will have a large number of significant positive impacts on the Sustainability Objectives, most notably on those that correspond to housing delivery (SO2), the vitality and viability of centres (SO4), economic growth (SO5), sustainable transport (SO7) and accessibility (SO8). The short and medium term impacts of these are related to the notion that development will be accommodated within or adjoining settlements according to their scale and existing role within each individual district; these correspond to the NPPF requirements of each LPA in the formulation of a Local Plan and offer a local distinctiveness to the strategic area relevant to local needs and communities. Significant long term impacts correspond to the requirement for Garden Communities in the latter stages of the plan period to meet unmet or residual needs in a sustainable manner and in sustainable locations.

Further long term significant positive impacts associated with Garden Communities can be expected to be realised on health (SO3), through the integration and requirement of suitable facilities and open space and recreation requirements. There will be additional positive impacts on social objectives through the provision of primary, secondary and early years facilities as per Garden City Principles and Essex County Council infrastructure requirements. Minor positive impacts can be expected through Garden Community development regarding townscapes (SO9) in the long term through a combined alleviation of pressures on existing settlements at the expected scale and also in conjunction with design expectations and opportunities. The focus away from the expansion of existing settlements will also alleviate air quality pressures in settlements (SO13), although there will likely to be uncertain impacts on climate change associated with the level of growth and the feasibility of identifying renewable energy schemes at this stage. Further uncertain impacts can be expected to arise from the principle of Garden Communities regarding the natural environment (SO6), landscapes (SO14) through the development of green field land in the long term, however it should be acknowledged that at the specified scale, and commensurate with the density requirements of Garden City Principles, Garden Communities are capable of mitigating such concerns effectively and can even lead to opportunities regarding biodiversity gain. Regarding water quality (SO11), no impacts have been highlighted, due to the findings of the AA, which states that 'the safeguards which will be included within the Section 2 Local Plans... will ensure that a given development will not proceed until the necessary infrastructure upgrades have been provided as necessary in accordance with Anglian Water and Environment Agency advice.'

Areas of short to medium term uncertainty relate to the school capacity pressures (SO8) experienced within many of the strategic area's existing settlements, and a lack of available land in many instances to meet the thresholds required for school expansion or provision. In addition, focusing development to existing

settlements may also conflict with the conservation objectives of preservation and enhancement within historic cores and areas (SO9). A focus on existing settlements can also be expected to exacerbate air quality issues associated with town centres and urban junctions (SO13). Despite these impacts however, the NPPF requires the authorities' Local Plans to contain specific policy requirements to alleviate such impacts in the first instance and otherwise seek appropriate mitigation measures. It should also be noted that a range of positive impacts can be anticipated from focusing development in such centres, particularly those related to social and economic objectives and those that seek to protect the natural environment.

5.5.3 Secondary Effects

Positive secondary effects can be expected to affect the majority of the sustainability objectives in line with their combined reflection of sustainable aspirations within the strategic area and also each authority.

5.5.4 Alternatives Considered

The preferred Spatial Strategy across the strategic area has been devised in conjunction with those of the Local Plans of the three authorities of Colchester, Braintree and Tendring as a result of this has been selected. Although the scope of the Strategic Section One for Local Plans is strategic, elements of the Spatial Strategy above can be seen to be non-strategic as per the remit of the three authorities' Local Plans. It should be acknowledged however that additional Spatial Strategy options may be considered reasonable within the wider area and have been explored throughout the plan-making process. It should additionally be noted however that their benefits (see below) have not been considered as significant as the selected approach. This is related to the associated benefits that will be realised in the short-long term (and beyond the plan period) arising from non-strategic and strategic level growth within each of, and across, the three authority areas.

The alternative approaches relate to a focus on different component parts of the preferred spatial strategy and were initially explored and expanded as sole scenarios for delivering and distributing growth across the strategic area throughout the plan process. The following alternatives represent a list of reasonable options:

- Alternative 1 – A focus on allocating all of the explored Garden Community options proposed in the Strategic Area at smaller individual scales
- Alternative 2 – The allocation of one Garden Community only
- Alternative 3 – The allocation of two Garden Communities only
- Alternative 4 – A focus on existing settlements only across the Strategic Area, commensurate to proportionate growth (exploring whether needs can be met without the allocation of Garden Communities).
- Alternative 5 – A focus on stimulating infrastructure and investment opportunities across the Strategic Area

In addition to the above, a sixth alternative was submitted to the North Essex Authorities for consideration as a Garden Community option, however could be reasonably explored as a spatial strategy option due to its spatial distribution of growth. The Campaign Against Urban Sprawl in Essex group (CAUSE) have created a vision for growth. This alternative, referred to as 'CAUSE's Metro Plan', seeks to deliver infrastructure first (where it does not already exist), making use of a rail asset for the purpose of a frequent metro service. The

proposal looks at housing and related growth for Colchester and Tendring, based on the Colchester to Clacton line, and to some extent the Walton branch. The CAUSE submission indicates that the Colchester-Clacton rail corridor would accommodate a substantial amount of housing growth, estimated at 6,000 – 8,000 homes (the submission additionally states that 7,000 – 9,000 homes could be delivered if higher densities are felt to be acceptable at the heart of these settlements), depending on land constraints. This rail-based growth would be distributed between the station catchment area of Alresford, Great Bentley, Weeley, and Thorpe le Soken.

- Alternative 6 – CAUSE’s Metro Plan

All alternatives have been re-appraised at this stage of the SA to explore whether the preferred Spatial Strategy is still appropriate and reflects the most sustainable option. For all of the alternatives, an assumption has been made in the appraisal that reflects the long term aspirations of the Garden Community options, and possible commencement in the latter stages of the plan period. In the short to medium term, those relevant elements of the Spatial Strategy (above) that apply have been extended into the appraisal of the alternatives. As such, short to medium term impacts are identified as the same as the preferred Spatial Strategy.

The re-appraisal is as follows:

Temporal Impacts	Sustainability Objectives (SO)														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Alternative 1 - A focus on allocating all Garden Community options															
Short	+	++	+	++	++	+	++	?	?	?	?	?	?	+	N/A
Medium	+	++	+	++	++	+	++	?	?	?	?	?	?	+	N/A
Long	+	++	++	++	?	--	?	++	?	+	?	?	+	--	0
Alternative 2 - The allocation of one larger Garden Community only															
Short	+	++	+	++	++	+	++	?	?	?	?	?	?	+	N/A
Medium	+	++	+	++	++	+	++	?	?	?	?	?	?	+	N/A
Long	+	--	?	?	?	?	-	+	+	+	?	?	+	+	0
Alternative 3 - The allocation of two Garden Communities only															
Short	+	++	+	++	++	+	++	?	?	?	?	?	?	+	N/A
Medium	+	++	+	++	++	+	++	?	?	?	?	?	?	+	N/A
Long	+	-	+	?	?	?	?	+	+	+	?	?	+	?	0
Alternative 4 - A focus on existing settlements, commensurate to proportionate growth across the Strategic Area															

Temporal Impacts	Sustainability Objectives (SO)														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
(exploring whether needs can be met without the allocation of Garden Communities)															
Short	+	++	+	++	++	+	++	?	?	?	?	?	?	+	N/A
Medium	+	++	+	++	++	+	++	?	?	?	?	?	?	+	N/A
Long	?	--	-	-	-	?	?	--	?	0	0	?	--	-	0
Alternative 5 - A focus on stimulating infrastructure and investment opportunities across the Strategic Area															
Short	+	++	+	++	++	+	++	?	?	?	?	?	?	+	N/A
Medium	+	++	+	++	++	+	++	?	?	?	?	?	?	+	N/A
Long	+	++	++	++	?	?	++	++	?	+	?	?	--	--	0
Alternative 6 – CAUSE’s Metro Plan: Colchester – Clacton Metro Option															
Short	+	++	+	++	++	+	++	?	?	?	?	?	?	+	N/A
Medium	+	++	+	++	++	+	++	?	?	?	?	?	?	+	N/A
Long	?	--	-	+	?	--	+	-	-	?	?	?	+	-	0

Alternative 1 - A focus on allocating all Garden Community options

A re-appraisal of the alternative in light of the additional number of Garden Community options has led to a number of negative impacts. Although this alternative could offer some benefits in terms of a wider scope of infrastructure provision in principle related to the provision of new schools and open space / recreational facilities, it would not respond to the need for a distribution of growth across existing settlements (i.e. the centres of largest population for each District/Borough). This is based on an assumption that unless the scope of each Garden Community option is significantly reduced, there could be no primary focus on proportionate growth at the existing settlements unless the North Essex Authorities area plans for growth significantly above that of OAN. A foremost focus on existing settlements is not only a principle of the Section One Spatial Strategy, but also that of the respective 'Section Two' Spatial Strategies of Braintree, Colchester and Tendring Councils. This also allows non-strategic growth to ensure housing delivery is forthcoming in the early stages of the plan period, particularly in the first five years. Although more a focus of the Section Two SAs, this report reiterates the notion that focusing proportionate growth to existing settlements in the first instance is the most sustainable strategy across each individual LPA area and the combined North Essex Authorities area. Should OAN targets remain the focus of growth in the plan period, then it can be considered that each Garden Community option would be required to come forward earlier than currently planned. This would either result in less sustainable outcomes associated with the likely absence of effective masterplanning due to the required timescales of commencement dates earlier in the plan period (particularly

affecting the Garden Communities' 'infrastructure first' approach), or lead to difficulties in providing a five year housing land supply due to deliverability concerns. More generally, this alternative would lead to likely overprovision in the Colchester area, and would create housing and employment inequalities across the strategic area. Impacts can be expected to be similar at the broad strategic level, however in line with the housing requirements of the Strategic Area, the short to medium term impacts could be expected to be uncertain on housing (SO2) and employment (SO4) related objectives in so far as the needs of existing communities would unlikely be met. For these reasons, and in relation to the existing sustainability of focusing development within the capacity of and adjacent to existing settlements at appropriate scales, the alternative has been rejected.

Alternative 2 - The allocation of one larger Garden Community only

Alternative 2 has been assessed as not meeting the North Essex Authorities' housing requirement in so far as no single proposal would be suitable or sustainable at the scale required. In addition, no single proposal has been submitted or identified throughout the plan-making process at the required scale. It can be seen that the geographic distribution and scales proposed for the allocated Garden Communities within the spatial strategy responds to ensuring benefits across all Councils in meeting their own long term needs in the plan period, as well as each being of a scale suitable that existing settlements remain resilient. Impacts have been predicted similarly for the preferred spatial strategy option in the short-medium term; however the notion of a single Garden Community that could meet the growth requirements of the three LPAs would likely have significant impacts on the natural and historic environment. It would also be unlikely that mitigation would be possible. This alternative has been rejected as it would not meet the North Essex Authorities' housing requirement and does not exist as a viable and available option. Although this alternative was considered a reasonable alternative within earlier stages of the plan-making process and explored primarily to determine its feasibility as part of the SA process, its inability to meet the strategic area's OAN requirements (or otherwise be at a scale that would likely result in significant negative impacts on landscape and inclusive access throughout the whole scheme) means that it can not now be considered a 'reasonable' alternative at this Publication Draft stage. For this reason the alternative has been rejected.

Alternative 3 - The allocation of two Garden Communities only

Alternative 3 has also been assessed as not meeting the North Essex Authorities' housing requirement in so far as no combination of two proposals is considered suitable, appropriate or broadly sustainable (in regard to their required scale and impact on the environment) at the scale required. It can be seen that the geographic distribution and scales proposed for the allocated Garden Communities within the spatial strategy responds to ensuring benefits across all Councils in meeting their own long term needs in the plan period, as well as each being of a scale suitable that existing settlements remain resilient. In contrast, this alternative can be said to have negative effects on social criteria as a result, with a lack of such distribution providing housing more widely across the strategic area. Impacts have been predicted similarly for the preferred spatial strategy option in the short-medium term, however the reliance on two Garden Communities would likely lead to them being required at a scale that would not be suitable in regard to natural or historic environmental conditions; it would be likely that impacts would be significant to the point that mitigation would be difficult. This alternative has been rejected as it would not meet the North Essex Authorities' housing requirement. Although this alternative was considered a reasonable alternative within earlier stages of the plan-making process and explored primarily to determine its feasibility as part of the SA process, its inability to meet the strategic area's OAN requirements means that it can not now be considered a 'reasonable' alternative at this Publication Draft stage. For this reason the alternative has been rejected.

Alternative 4 - A focus on existing settlements only, commensurate to proportionate growth across the Strategic Area (exploring whether needs can be met without the allocation of Garden Communities).

This alternative essentially represents a 'business as usual / do nothing scenario' and explores whether the North Essex Area can feasibly meet identified growth needs without the allocation of Garden Communities. Please note that an assessment of the principles of Garden Communities against more traditional approaches to meeting strategic growth requirements is explored later on in this SA. The need for Garden Communities was identified through the Issues and Options stage Local Plans of the respective authorities, who identified early in the plan making process that needs could not be met within the plan period in each administrative area alone, and solutions had to be found within the wider area. A re-assessment of the alternative at this Draft Publication stage has led to some revised conclusions surrounding the impacts of extending existing settlements in potential unsustainable areas in the latter stages of the plan period and beyond. Notionally, over a wide Strategic Area this alternative would represent a sustainable option, however the presence of a Section One, including Garden Communities, is validated by the need to meet housing and employment needs that can not be met in the latter stages of the plan period by a focus on proportionate growth across the North Essex Authorities area's settlements alone. It should be acknowledged that the principle of this alternative exists as a fundamental part of the Section One Spatial Strategy in order to deliver sustainable growth in the short to medium term stages of plan period. This is also in accordance with the Section Two Spatial Strategies of the respective Councils and the allocation of sites for non-strategic level growth in order to demonstrate a five year housing land supply. In order to represent a 'reasonable' alternative, this alternative would require the formulation of a joint or combined settlement hierarchy. Proportionately this would lead to significant focus on Colchester. The appraisal of this alternative has been undertaken on the basis that existing settlements would have to respond to allowing higher densities and the development of more marginal peripheral land. There would be a significant amount of increasing impacts associated with this theoretical trend, culminating in a large amount of uncertain and negative impacts in the long term, when Garden Communities have been identified as required to come forward to meet unmet housing and employment needs. The alternative would not correspond to the Local Plan requirements of the NPPF on a LPA basis, and could lead to the overexpansion of some settlements through the possible development of unsuitable extensions with no wider sustainability benefits. Strategically, it would also not offer a sustainable distribution across the wider area, or reflect that some settlements within the Strategic Area serve an important function in terms of services despite not having a significant population. This alternative was explored at an earlier stage of the plan-making process, with findings presented in the Preferred Options SA. Although this alternative was considered a reasonable alternative within earlier stages of the plan-making process and explored primarily to determine its feasibility as part of the SA process, its inability to meet the strategic area's OAN requirements means that it can not now be considered a 'reasonable' alternative at this Publication Draft stage.

Alternative 5 - A focus on stimulating infrastructure and investment opportunities across the Strategic Area

A re-appraisal of this alternative has led to a number of likely negative impacts, becoming more significant in the long term, associated with a possible unsustainable concentration of sites in certain areas where infrastructure improvements would be economically beneficial, and also the allocation of sites that are not done so with sustainability at the forefront of the selection process. The size threshold for Garden Communities is set at that which would require the delivery of a new secondary school in each instance, as determined in the ECC Developers' Guide to Infrastructure Contributions Update 2016. Despite this, to entirely

focus on the premise of distributing growth to those areas in order to deliver additional secondary school capacity in the wider area would not be a sustainable one, in so far as it would not take into consideration the benefits and indicative impacts associated with other tenets of sustainability, in particular those that are environmental in nature and seek to protect such assets. To extend the premise further to other infrastructure requirements across the strategic area would not allocate Garden Communities in response to their ability to meet Garden City principles. Infrastructure requirements in less marketable areas can be expected to warrant notions of housing and employment delivery unviable. Although infrastructure considerations partly represent the case for their preferred status, it should be acknowledged that the preferred Garden Community options represent sustainable and developable options in their own right as well as in consideration of their distribution as part of a wider Spatial Strategy. The alternative has been rejected in line with the selection and allocation of Garden Communities based on the balance of opportunities and constraints and sustainability, rather than solely economic purposes.

Alternative 6 – CAUSE’s Metro Plan: Colchester – Clacton Metro Option

This alternative has been deemed as having likely negative impacts due to the focus of growth in Tendring only, and not distributing growth throughout the North Essex Authorities area. It is unlikely that the geographic distribution will benefit from the economies of scale of a fewer amount of larger Garden Communities, this not only impacts on the ability of locations to stimulate infrastructure, such as schools, and also the ability to mitigate any negative environmental impacts. The Metro Plan, as a Spatial Strategy option, will have positive impacts associated with sustainable transport and air quality; however it should be acknowledged that accessibility is poor at each location regarding A-classified roads and additional public transport infrastructure choices. In consideration of the OAN Report, it could be considered that this distribution would not meet the existing needs of Colchester or Braintree District; in particular the requirements to ensure affordable housing and jobs in a range of sectors that could be expected from a wider distribution of growth, including the locations of the allocated Garden Communities. This is contrary to the NPPF, stating that local planning authorities should positively seek opportunities to meet the development needs of their area, to which the notion of the Section One covering the North Essex Authorities area is in response to. The alternative does not consider the lack of available land within the stated focal points for growth in Tendring. It also does not consider the suitability of land, especially in regard to alternative sites. This alternative was explored at an earlier stage of the plan-making process, with findings presented in the Preferred Options SA. Although this alternative was considered a reasonable alternative within earlier stages of the plan-making process and explored primarily to determine its feasibility as part of the SA process, its inability to meet the strategic area’s OAN requirements means that it can not now be considered a ‘reasonable’ spatial strategy alternative at this Publication Draft stage.

5.5.5 Proposed Mitigation Measures / Recommendations

No mitigation measures or recommendations are proposed at this stage.

5.6 Policy SP3 – Meeting Housing Needs

5.6.1 Context / Justification

Provision of sufficient housing is critical to meet the needs of a growing population and for the effective functioning of local economies. The North Essex authorities are committed to plan positively for new homes and to significantly boost the supply of housing to meet the needs of the area. To meet the requirements of national policy to establish the number and type of new homes, the authorities commissioned Peter Brett Associates to produce an Objectively Assessed Housing Need Study building on earlier work. This was first published in July 2015 and updated in January 2016. It meets the requirements of the NPPF to prepare a Strategic Housing Market Assessment (SHMA). Detailed analysis in the report suggests that a Housing Market Area comprising Braintree, Colchester, Chelmsford and Tendring Council areas forms a sound basis for assessing housing need.

Demographic projections are the starting point for assessing how much housing will be required across an area. Based on 2012 national projections covering the period 2013 to 2037, some 4,910 more people will be living in the area each year. This translates to 2,589 additional households per year, which generates a need for an additional 2,691 new homes each year.

Analysis of economic forecasts reveals that to support the expected jobs growth would require 3,090 net new homes per year. This represents an uplift of 399 additional homes, or 15%, over the demographically projected need referred to above. The report concludes that this 15% 'future employment' uplift over the whole HMA will cover any 'market signals' adjustment that can reasonably be justified. It also makes an allowance for additional London-related migration.

The conclusion reached is that the objectively assessed need across the Housing Market Area is 3,090 new homes a year over the period 2013 – 2037. This is the number of new homes needed to provide sufficient labour to meet the number of forecast jobs. The total requirement across north Essex, excluding Chelmsford City Council's area, is 2,315 new homes per year. The North Essex Authorities all accept that in future Local Plan periods the Housing needs (OAN) for the whole of North Essex (the three Districts) will be calculated and the estimated supply from all the Garden Communities in North Essex will be deducted first from the overall housing need leaving a local residual District need to be assessed for each District

The Objectively Assessed Housing Need Study and SHMA update seek to establish a balance between jobs and homes across the area, although there is some uncertainty in relation to this arising from unattributed population change (UPC) within Tendring. 550 dwellings a year is suggested as the indicative objectively assessed need for Tendring because at this level of provision affordable need can be met. This reasonable rounded figure, which should be kept under review, is considered an appropriate response to the uncertainty arising from the UPC.

Evidence on the requirements of Gypsies and Travellers and Travelling Showpeople accommodation will be set out in more detail within the individual Local Plans. Garden Communities need to be mixed and balanced communities and will be expected to provide 30% affordable housing as set out in the Plan.

The policy is as follows:

Policy SP3 – Meeting Housing Needs

The local planning authorities will identify sufficient deliverable sites or broad locations for their respective plan period, against the requirement in the table below.

Each authority will maintain a sufficient supply of deliverable sites to provide for at least five years' worth of housing and will work proactively with applicants to bring forward sites that accord with the overall spatial strategy and relevant policies in the plan.

Local Authority	Net additional dwellings per annum	Minimum net additional homes in the Plan period
Braintree	716	14,320
Colchester	920	18,400
Tendring	550	11,000
Total	2,186	43,720

A Development Plan Document will be developed for each of the garden communities to set out the principles of their design, development and phasing as well as a mechanism to appropriately distribute housing completions to the three Councils and this will be agreed through a Memorandum of Understanding.

5.6.2 Significant and Temporal Effects

Table 12: Impact on Sustainability Objectives: Policy SP3

Temporal Impacts	Sustainability Objectives (SO)														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Short	N/A	++	N/A	N/A	N/A	0	N/A	N/A	N/A	N/A	0	N/A	N/A	?	N/A
Medium	N/A	++	N/A	N/A	N/A	0	N/A	N/A	N/A	N/A	0	N/A	N/A	?	N/A
Long	N/A	++	N/A	N/A	N/A	0	N/A	N/A	N/A	N/A	0	N/A	N/A	?	N/A

Please note that a lot of the Sustainability Objectives are more relevant to site specifics and impacts reflective of individual and cumulative site allocations within the Section One and the respective Councils' Section Two Local Plans. For more detailed information of such impacts, please see the assessments of the Garden Communities in this SA and the findings of the respective Section Two SAs.

Significant positive impacts have been highlighted in the short to long term associated with the housing need (SO2) targets set out in the Policy.

There will be 'no impact' on biodiversity (SO6) as a result of the findings of the Appropriate Assessment (AA)

(2017) of the Section One, regarding recreational pressures associated with the significant increase in growth stated within the Policy. The AA concludes that 'providing that the North Essex Authorities continue to collaborate and prepare the necessary Recreation Avoidance and Mitigation Strategies (RAMS) ... in close consultation with Natural England, and the RAMS are ready for implementation prior to adoption of the Section 1 and Section 2 Local Plans, the Strategic Section 1 Local Plans is not predicted to result in adverse effects on the integrity of the Stour and Orwell Estuaries SPA/Ramsar, Hamford Water SPA/Ramsar, Essex Estuaries SAC, Colne Estuary SPA/Ramsar, or Blackwater Estuary SPA/Ramsar, either alone or in combination with other plans and projects as a result of recreation.' In addition, the AA indicates that the strategic approach and scope of the Section One enables mitigation to be effectively incorporated.

Regarding water quality (SO11), the AA adds the following, 'the measures provided in the Section 2 Local Plans will (also) provide sufficient certainty that the overall strategic growth proposed in North Essex as part of the Section 1 for Local Plans will not result in significant adverse effects on the Stour and Orwell Estuaries SPA/Ramsar, Colne Estuary SPA/Ramsar, or Essex Estuaries SAC as a result of changes in water quality.' The Policy will therefore have no impact on this sustainability objective.

Uncertain impacts have been identified for landscapes (SO14) at this level of housing growth due to the requirements of a significant amount of development on Greenfield land. Such impacts have been identified as reflective of the level of growth stated across the North Essex Authorities area; however more detailed impacts are identified in the Section Two SAs of the respective Councils.

For context, the OAN Report states that projections are robust, 'with one exception: the figures for Tendring are heavily affected by Unattributable Population Change - an error in the Census which we are unable to explain. Depending on the view taken about the UPC, the official projections may overstate need in Tendring. If we use an alternative projection that adjusts for the UPC, the demographically projected need for Tendring falls from 705 to 479 dpa.'

In considering the assessment of the Policy alongside the alternatives (see below), it should be acknowledged that 550 dwellings a year is suggested as the indicative objectively assessed need for Tendring because at this level of provision affordable need can be met. This, in conjunction with review, is considered an appropriate response to the uncertainty arising from the UPC and for this reason has been selected, in line with Tendring's Local Plan policy and evidence base requirements.

Please note that for the rest of the Sustainability Objectives, 'N/A' has been highlighted. This is due to many of these objectives being more closely related to the detailed distribution of housing in specific areas. In focusing the appraisal of this policy on more direct or directly relevant Objectives, the conclusions of the Strategic Section One for Local Plans can be better informed in relation to the whole document, with recommendations being more focused to the specific purpose of relevant elements or Policies.

5.6.3 Secondary Effects

There will be a long term secondary effect associated with the 'education and skills' elements of Sustainability Objective 5. This is due to the development of Garden Communities to meet residual unmet need beyond the identification of suitable sites within the context of the authorities' Local Plan requirements. This is associated with the principles of such settlements, in addition to the indirect effects of identifying growth requirements in conjunction with housing growth in order to provide sufficient labour to meet forecasted employment requirements.

5.6.4 Alternatives Considered

The NPPF is clear that the HMA as whole should work to meet its OAN in full, provided that it has the sustainable capacity to do so consistent with the policies in the NPPF. How provision should be distributed between districts will depend on supply factors and policy objectives. In response to this, it should be noted that each authority has identified a justified and achievable indicative housing target in line with their work towards a Local Plan in each instance and these needs are reflected in the policy. This work has factored in the requirements of LPAs to identify a 5 year housing supply in line with, and as well as other requirements of the NPPF, notably regarding the evidence gathered through Local Plan call-for-sites processes and resultant work in the production of Strategic (Housing) Land Availability Assessments (S[H]LAAs). This work identifies land that is suitable, achievable and available (within Local Plan periods) and alternatives surrounding each authority's capacity for new growth are explored in more detail in the SA of their Section Two Local Plans, which also factor in non-strategic allocations.

The scope of the Strategic Section One for Local Plans explores options for the delivery of the residual or 'unmet' growth beyond those sites that represent a 5 year housing supply and are otherwise suitable, achievable and available over Local Plan periods in each authority. On this basis, the alternative options for both housing and employment supply largely represent the conclusions of this SA - in exploring the sustainability of the proposed Garden Community options.

Nevertheless, at the strategic level alternatives exist that could initially be perceived as reasonable across the HMA and more specifically within the three authorities participating in exploring options within the Strategic Section One for Local Plans document. The Objectively Assessed Housing Need Study and SHMA update seek to establish a balance between jobs and homes across the area, although there is some uncertainty in relation to this arising from unattributed population change (UPC) within Tendring. A total of 550 dwellings a year is suggested as the indicative objectively assessed need for Tendring because at this level of provision affordable need can be met. This reasonable rounded figure, which should be kept under review, is considered an appropriate response to the uncertainty arising from the UPC.

For the purposes of fully meeting OAN, the Policy has been selected. For robustness however, the alternative scenarios presented in the OAN Report have been subject to appraisal in this report. These respond to different percentage uplifts in future employment than for the 15% iterated within the preferred policy above. The alternatives, as sourced within the OAN Report are:

- Alternative 1 – A lower uplift than the policy approach. This responds to 8% uplift over the HMA and represents an indicative split where Tendring still meets its SNPP provision and the uplift is reduced for the HMA partner authorities. This has been appraised as specific to the OAN alternative, and also of an 'indicative lower' level of growth.
- Alternative 2 – A higher uplift than the policy approach. This responds to 17% uplift over the HMA and represents an approach where Tendring provides only enough homes to meet its projection before any uplift is applied. This has been appraised as specific to the OAN alternative, and also of an 'indicative higher' level of growth.

Temporal Impacts	Sustainability Objectives (SO)														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Alternative 1 - A lower uplift than the policy approach															
Short	N/A	?	N/A	N/A	N/A	0	N/A	N/A	N/A	N/A	0	N/A	N/A	?	N/A
Medium	N/A	?	N/A	N/A	N/A	0	N/A	N/A	N/A	N/A	0	N/A	N/A	?	N/A
Long	N/A	?	N/A	N/A	N/A	0	N/A	N/A	N/A	N/A	0	N/A	N/A	?	N/A
Alternative 2 - A higher uplift than the policy approach															
Short	N/A	++	N/A	N/A	N/A	?	N/A	N/A	N/A	N/A	?	N/A	N/A	-	N/A
Medium	N/A	++	N/A	N/A	N/A	?	N/A	N/A	N/A	N/A	?	N/A	N/A	-	N/A
Long	N/A	++	N/A	N/A	N/A	?	N/A	N/A	N/A	N/A	?	N/A	N/A	-	N/A

Alternative 1 - A lower uplift than the policy approach

Alternative 1 has been appraised to represent an indicative lower uplift than the 15% used in the preferred policy approach. The implications of this scenario are that housing requirements are comparatively evenly spread across the three authorities, with approximately 700 dwellings per annum identified for Tendring. The OAN Report indicates that under this alternative scenario it is possible that Tendring would have a surplus of homes against those needed to support the HMA baseline job growth and commuting patterns would shift slightly. Although similar impacts could be expected for both this alternative and the preferred policy approach, it is important to consider that this is based on two key assumptions; that housing provision in Tendring meets the SNPP 2012 housing demand, and that any surplus of workers over jobs is available to work in the rest of the HMA. For this reason impacts are uncertain. Work towards agreeing a housing requirement undertaken by Tendring District Council for the purposes of their Local Plan calculates that capacity exists as indicated and espoused in the preferred policy, as evidenced by extant planning permissions, windfall allowances, submitted sites in the LPAs call-for-sites process as deemed suitable, achievable and available in their SHLAA and inconformity to their settlement hierarchy. For these reasons this alternative has been rejected. There will be no impacts on biodiversity and water quality in line with the findings of Section One's level of growth stated in the Appropriate Assessment (AA). Uncertain impacts have been highlighted for landscapes where impacts are largely unknown, however it should be added that a lower growth scenario can be expected to have comparatively less implications than those of the level of growth stated in the policy.

Alternative 2 - A higher uplift than the policy approach

Alternative 2 has been appraised to represent an indicative higher uplift than the 15% used in the preferred policy approach. In this alternative the scale of the uplift in new homes needed increases from 15% to 17% for the HMA. This is because the OAN 'starting position' for Tendring is now lower than the SNPP. This

responds to an additional 50 dwellings per annum in Tendring over the plan period, with no additional changes to the preferred policy approach's housing requirement figures for the other two authorities. Although this could be perceived as a small increase over the entire HMA, which is reflected in the above appraisal, it does not address the question regarding UPC and would have implications on available land in Tendring. Impacts would be similar largely due to the alternative not being distinctly different from the preferred policy approach at the strategic level over the HMA; however the implications at the micro level, in Tendring are likely to be more significant. As per Alternative 1, work towards agreeing a housing requirement undertaken by Tendring District Council for the purposes of their Local Plan calculates that capacity exists as indicated and espoused in the preferred policy, as evidenced by extant planning permissions, windfall allowances, submitted sites in the LPAs call-for-sites process as deemed suitable, achievable and available in their SHLAA and inconformity to their settlement hierarchy. For these reasons this alternative has been rejected. There will be uncertain impacts on Natura 2000 designations (biodiversity and water quality) due to higher growth; this is related to the initial findings of the HRA Screening for the Section One and the fact that the AA has not tested the implications of a higher growth scenario. There will be negative impacts on landscapes where higher growth can be expected to have comparatively stronger negative implications than those of the level of growth stated in the policy.

5.6.5 Proposed Mitigation Measures / Recommendations

No mitigation measures or recommendations are proposed at this stage.

5.7 Policy SP4 – Providing for Employment and Retail

5.7.1 Context / Justification

A key objective for the area is to strengthen and diversify local economies to provide more jobs; and to achieve a better balance between the location of jobs and housing, which will reduce the need to travel and promote sustainable growth.

Braintree District's employment is relatively focused on industrial-type sectors, including construction and manufacturing. London Stansted airport plays a significant role in not only employing residents of the District, but through the indirect economic benefits associated with proximity with such a large employment hub.

Retail is the second largest sector by employment and plays an important role in sustaining the District's three key town centres. The financial and insurance sector, where Braintree District traditionally has a relatively small proportion of employment, has seen some strong employment growth in recent years. This may be a growth sector in the future.

Colchester is the dominant town within the Essex Haven Gateway and will accommodate much of the future growth in the sub-region. It is one of the UK's fastest growing towns and has developed a strong economy, linked to the town's historic character, cultural activities and its university.

Tendring District has a diverse economy with local employment across a range of activities. Health, retail and education are the largest sectors in terms of the number of jobs and together represent 45% of the District's total employment. Harwich is home to Harwich International Port – one of the District's major employers. To the west of the District, the economy and labour market of Manningtree is influenced by its relative proximity

to Colchester and good transport links to London. The interior of the District is largely rural and is characterised by a high-quality environment, interspersed with small settlements.

Opportunities have been identified for Tendring to develop potential future strengths in offshore wind and the care and assisted living sector.

As part of the SHMA work, an analysis of economic forecasts was undertaken together with demographic projections to establish the inter-relationship between population growth, forecasts of new jobs and the number of new homes needed to accommodate these levels of growth. Employment Land Needs Assessments have been carried out by each authority which set out the amount of employment land that is required within the Plan periods. The policy is as follows:

Policy SP4 – Providing for Employment and Retail

A strong, sustainable and diverse economy will be promoted across North Essex with the Councils pursuing a flexible approach to economic sectors showing growth potential across the Plan period.

Employment forecasts have been developed using two standard models (East of England Forecasting Model (EEFM) and Experian 2016) which forecast total job growth for each of the local authorities based on past trends. Each local authority has been advised on the most appropriate modelling figure to use in the context of reconciling job and housing demand. These figures are set out for the housing market as follows for the period 2013-2037:

	Annual Jobs Forecast
Braintree (EEFM)	490
Colchester (EEFM)	928
Tendring (Experian)	490

In terms of specific B use land provision, each local authority has undertaken work to establish what quantum of employment land would be required within the Plan period to meet the demand identified below for additional B use employment land. These B use employment areas are distributed between each local authority area and based on achieving a sustainable balance between jobs and the available labour force through population growth. As noted above, calculations of employment land required are affected by a range of issues that lead to different employment land portfolios for each local authority area, resulting in a proportionately greater quantum of new floorspace per job in Braintree and Tendring than in Colchester. This is a function of the prominence of higher density office requirements in Colchester and lower density logistics and industrial uses in Braintree and Tendring. The table below sets out the three authorities' employment land requirements for the period 2016 – 33 for two plausible scenarios, baseline and higher growth. These two bookends provide flexibility to allow for each authority's supply trajectory to reflect their differing requirements.

Hectares of B use employment land

	required	
	Baseline (2012 Based SNPP)	Higher Growth Scenario
Braintree	23.0	43.3
Colchester	22.0	55.8
Tendring	20.0	40
North Essex	65ha	139.1

5.7.2 Significant and Temporal Effects

Table 13: Impact on Sustainability Objectives: Policy SP4

Temporal Impacts	Sustainability Objectives (SO)														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Short	N/A	N/A	N/A	0	++	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Medium	N/A	N/A	N/A	0	++	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Long	N/A	N/A	N/A	0	++	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

It should be noted that the Preferred Options Section One Plan presented only the hectares of B use employment land required rather than also including an annual jobs forecast. This move towards presenting employment requirements in jobs is a clearer approach in demonstrating the links between housing and jobs in the North Essex area. There is also more focus on the importance of the retail sector, however it is not considered important that more information is provided in Section One, with the Council's respective Section Twos providing additional policy content. For this reason, 'no impacts' have been identified on the vitality and viability of town centres (SO4). It can be considered however that there will be positive implications on the town centre of Colchester as a result of the higher annual jobs forecast representing a higher degree of retail expansion and B1 uses in comparison to other centres in the strategic area.

The forecasts used in the SHMA work / OAN Report have an underlying principle: that planning for housing, economic land uses and community facilities / services should be integrated, so that the demand for labour is fulfilled and there is no unsustainable commuting. They have been taken from the East of England Economic Model (EEFM) which provides integrated economic, demographic and housing need forecasts. In the EEFM, population change, and the resulting household change and housing demand, are partly driven by job opportunities.

The principle of these links to identifying future job growth to housing provision is a key tenet of sustainability and as such, there will be significant positive impacts associated with employment (SO5). Short to medium term impacts are more closely related to the strategic principles will underpin the approach to economic

growth across North Essex, with long term impacts associated with the development of Garden Communities that will provide a closely aligned mix of employment. There will also be long term positive impacts on the labour market through the development of the transport infrastructure elements of the Garden Communities.

Please note that for the rest of the Sustainability Objectives, 'N/A' has been highlighted. This is due to many of these objectives being more closely related to the detailed distribution of employment in specific areas. In focusing the appraisal of this policy on more direct or directly relevant Objectives, the conclusions of the Strategic Section One for Local Plans can be better informed in relation to the whole document, with recommendations being more focused to the specific purpose of relevant elements or Policies.

5.7.3 Secondary Effects

There will be a long term secondary effect associated with the 'education and skills' element of Sustainability Objective 5. This is due to the development of Garden Communities. This is associated with the principles of such settlements, in addition to the indirect effects of identifying growth requirements in a range of employment sectors tailored to needs and shortages.

5.7.4 Alternatives Considered

The OAN Report calculates need by starting from the East of England Economic Model (EEFM), as taken forward into a study's jobs-led scenarios (Edge Analytics, Phase 7 Study) and then uses a model to fix ratios; rather than to use the EEFM adjustments which used unemployment rates.

The OAN Report states that, 'in short, EEFM uses 'economic migration' to balance the local relationship between jobs and labour. Its housing forecasts are job-led forecasts: they estimate the numbers of dwellings that would be required to meet housing demand, including the demand resulting from changing employment opportunities. The job-led scenarios in the Edge Phase 7 study have the same intention and use a broadly similar approach. These scenarios take from the EEFM future workplace jobs and people employed, and three other key variables: unemployment rates, economic activity rates and commuting ratios. But to model the relationship of workplace jobs to resident population to housing demand, Edge Analytics uses its own model, PopGroup, whose mechanics are different from EEFM's. In particular, in PopGroup there is no demand-side link whereby the resident population creates local jobs through its consumption of local services; and the supply link is based on fixed ratios, rather than the dynamic adjustment through unemployment rates used in the EEFM.'

As can be seen, the above identifies an alternative approach. This is:

- Alternative 1 – Forecasts based on EEFM findings only (an indicative higher amount of jobs).

Please note that a second alternative was also analysed in the OAN Report. This was a different forecasting model, known as Experian, developed by Cambridge Econometrics. This forecast showed considerably less growth than the other alternatives, and so it was not considered further in the OAN Report, nor can it be considered a reasonable alternative for the purposes of assessment in this SA.

Temporal Impacts	Sustainability Objectives (SO)														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Alternative 1 - Forecasts based on EEFM findings only															
Short	N/A	N/A	N/A	N/A	+	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Medium	N/A	N/A	N/A	N/A	+	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Long	N/A	N/A	N/A	N/A	++	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Alternative 1: Forecasts based on EEFM findings only

Alternative 1 assumes that labour demand depends partly on the size of the local population and local consumption of services (creating jobs) and partly on wider national or even global demand. Numbers of jobs are translated into resident workers. Regarding labour supply, the future resident population is determined by natural change and trend-driven migration. The OAN Report states that, 'in short, EEFM uses 'economic migration' to balance the local relationship between jobs and labour. Its housing forecasts are job-led forecasts: they estimate the numbers of dwellings that would be required to meet housing demand, including the demand resulting from changing employment opportunities.' This method does not factor in unemployment rates, economic activity rates and commuting ratios however, which vary across the HMA, unlike the preferred methodology used in the OAN Report in which there is no demand-side link whereby the resident population creates local jobs through its consumption of local services.

The impacts of the alternative will be similar to the preferred policy methodology, with significant positive impacts on long term employment (SO5), in line with the 'mixed use' and sustainable transport infrastructure opportunities associated with Garden Communities. Impacts in the short to medium term are however less significant, due to the alternative primarily not initially factoring in commuting; this leads to forecasts showing a disparity between population growth and job growth. The OAN Report indicates that in Braintree and Colchester there would be a higher population than identified in the 2012 Sub National Population Projections (SNPP), suggesting that if population grows in line with the official projection it may not provide enough workers. This issue would rely on being resolved by changes in commuting. The OAN Report also adds that for Tendring the EEFM figure would be well below the SNPP, confirming that trend-based population growth would result in a labour surplus. For these reasons, the alternative has been rejected and the preferred policy approach selected.

5.7.5 Proposed Mitigation Measures / Recommendations

No mitigation measures or recommendations are proposed at this stage.

5.8 Policy SP5 – Infrastructure and Connectivity

5.8.1 Context / Justification

Infrastructure and connectivity requirements are expected to the strategic transport network, the inter-urban road network, the A12, the A120, the A130, route based strategies; rail; public transport, walking and cycling, education and healthcare and broadband.

The policy is as follows:

Policy SP5 – Infrastructure and Connectivity

Development must be supported by provision of infrastructure, services and facilities that are identified to serve the needs arising from new development.

The following are strategic priorities for infrastructure provision or improvements within the strategic area:

Transport

- New and improved infrastructure required to support economic growth, strategic and site-specific priorities outlined in the second part of each Local Plan
- Substantially improved connectivity by promoting more sustainable travel patterns, introducing urban transport packages to increase transport choice, providing better public transport infrastructure and services, and enhanced inter-urban transport corridors
- Increased rail capacity, reliability and punctuality; and reduced overall journey times by rail
- Support changes in travel behaviour by applying the modal hierarchy and increasing opportunities for sustainable modes of transport that can compete effectively with private vehicles
- Prioritise public transport, particularly in the urban areas, including new and innovative ways of providing public transport including;
 - high quality rapid public transport networks and connections, in and around urban areas with links to the new Garden Communities
 - maximising the use of the local rail network to serve existing communities and locations for large-scale growth
 - a bus network that is high quality, reliable, simple to use, integrated with other modes and offers flexibility to serve areas of new demand
 - promoting wider use of community transport schemes
- Improved road infrastructure and strategic highway connections to reduce congestion and provide more reliable journey times along the A12, A120, and A133 to improve access to markets and suppliers for business, widen employment opportunities and support growth

- Improved junctions on the A12 and other main roads to reduce congestion and address safety
- A dualled A120 between the A12 and Braintree
- A comprehensive network of segregated walking and cycling routes linking key centres of activity contributing to an attractive, safe, legible and prioritised walking/cycling environment
- Develop innovative strategies for the management of private car use and parking including support for electric car charging points.

Education

- Provide sufficient school places in the form of expanded or new primary and secondary schools together with early years and childcare facilities, with larger developments setting aside land and/or contributing to the cost of delivering land for new schools where required
- Facilitate and support provision of practical vocational training, apprenticeships, and further and higher education.

Health

- Ensure that essential healthcare infrastructure is provided as part of new developments of appropriate scale in the form of expanded or new healthcare facilities including primary and acute care; pharmacies; dental surgeries; opticians, supporting community services including hospices, treatment and counselling centres.
- Require new development to maximise its positive contribution in creating healthy communities and minimise its negative health impacts, both in avoidance and mitigation, as far as is practicable.

Broadband

Roll-out of superfast broadband across North Essex to secure the earliest availability for universal broadband coverage and fastest connection speeds for all existing and new developments (residential and non-residential), where all new properties allow for the provision for superfast broadband in order to allow connection to that network as and when it is made available.

5.8.2 Significant and Temporal Effects

Table 14: Impact on Sustainability Objectives: Policy SP5

Temporal Impacts	Sustainability Objectives (SO)														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Short	N/A	N/A	++	++	++	0	++	++	N/A	0	N/A	N/A	N/A	N/A	N/A
Medium	N/A	N/A	++	++	++	0	++	++	N/A	0	N/A	N/A	N/A	N/A	N/A
Long	N/A	N/A	++	++	++	0	++	++	N/A	0	N/A	N/A	N/A	N/A	N/A

There will be significant positive impacts associated with those Sustainability Objectives related to infrastructure delivery that would specifically be related to strategic level growth and stimulated by it across the Strategic Area; these being health (SO3) and sustainable transport (SO7). Additionally, significant positive impacts have been highlighted for those specific assurances in the Policy; those being economic growth (SO5) through new and improved infrastructure requirements to support economic growth and strategic and site-specific priorities, and accessibility and public transport infrastructure (SO8 and SO7) through various identified improvements required to the strategic road and rail network to accommodate the level of growth in the Strategic Area. These measures will also have significant positive impacts on the vitality and viability of town centres (SO4).

'No impacts' have been identified for sustainability objectives associated with the natural environment and biodiversity (SO6) and renewable energy (SO10). There are opportunities for combined strategic level growth to stimulate aspirational improvements regarding these themes for wider gains or benefits; however the policy does not seek to ensure this. It should be acknowledged however that such requirements are included within Policy SP6.

No impact has also been highlighted for water scarcity / sewerage (SO11). This is due to such infrastructure being beyond the remit of such a plan and a prerequisite of the suitability of all development. Such infrastructure requirements will be specified by the relevant service provider.

5.8.3 Secondary Effects

The impacts on housing delivery (SO2) can be considered secondary in line with the requirement of the stated infrastructure being required to support sustainable growth and communities in the first instance. This is also true of air quality (SO14) which can be expected to improve in line with assurances of sustainable transport infrastructure as contained within the Policy.

5.8.4 Alternatives Considered

The infrastructure requirements are specific to the content of the Strategic Section One for Local Plans and no other alternatives can be considered reasonable. As such, the Policy was selected. It can be considered that alternatives could only regard different permutations of alternatives explored within this SA, in particular

those related to Spatial Strategy and Garden Community options explored within this SA and considered in the plan-making process.

5.8.5 Proposed Mitigation Measures / Recommendations

No mitigation measures or recommendations are proposed at this stage.

5.9 Policy SP6 – Place Shaping Principles

5.9.1 Context / Justification

New development must reflect high standards of urban and architectural design. It must also be functional and viable. Major new developments will be planned carefully with the use of masterplans and design codes where appropriate. This requirement for high design standards will apply to public and private buildings across all scales of development as well as to infrastructure projects. Enhancements to the public realm, landscaping measures and attention to architectural detail will be important features that the authorities will wish to see included in new developments. Strategic scale and more local green infrastructure can make a vital contribution to quality of place, biodiversity and health outcomes.

The policy is as follows:

Policy SP6 – Place Shaping Principles

All new development must meet the highest standards of urban and architectural design. The local authorities encourage the use of development frameworks, masterplans and other design guidance documents and will use design codes where appropriate for strategic scale developments.

All new development should reflect the following principles:

- Respond positively to local character and context to preserve and enhance the quality of existing communities and their environs;
- Provide buildings that exhibit individual architectural quality within well-considered public and private realms;
- Protect and enhance assets of historical or natural value;
- Create well-connected places that prioritise the needs of pedestrians, cyclists and public transport services above use of the private car;
- Where possible, provide a mix of land uses, services and densities with well-defined public and private spaces to create sustainable well-designed neighbourhoods;
- Enhance the public realm through additional landscaping, street furniture and other distinctive features that help to create a sense of place;
- Provide streets and spaces that are overlooked and active and promote inclusive access;
- Include parking facilities that are well integrated as part of the overall design and are adaptable if levels of private car ownership fall;

- Provide an integrated network of multi-functional public open space and green and blue infrastructure that connects with existing green infrastructure where possible;
- Include measures to promote environmental sustainability including addressing energy and water efficiency, and provision of appropriate wastewater and flood mitigation measures; and
- Protect the amenity of existing and future residents and users with regard to noise, vibration, smell, loss of light and overlooking.

5.9.2 Significant and Temporal Effects

Table 15: Impact on Sustainability Objectives: Policy SP6

Temporal Impacts	Sustainability Objectives (SO)														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Short	++	N/A	+	+	N/A	+	++	++	++	+	+	++	+	0	N/A
Medium	++	N/A	+	+	N/A	+	++	++	++	+	+	++	+	0	N/A
Long	++	N/A	+	+	N/A	+	++	++	++	+	+	++	+	0	N/A

There will be significant positive impacts resulting from the Policy on aspirations regarding community safety (SO1), sustainable transport (SO7), accessibility (SO8), townscapes and the historic environment (SO9), and minimising flood risk (SO12). Minor positive impacts will be realised for health (SO3) through public open space requirements, the vitality of centres (SO4) and water quality (SO11).

There may however be a conflict between the principle that seeks biodiversity gain (SO6) through green and blue infrastructure that is also integrated with multi-functional public open space. The incorporation of these should be considered separate requirements, as biodiversity features are unlikely to flourish through human disturbance. The Policy responds to aspirations to address energy efficiency in strategic scale development opportunities (SO10), however does not seek any renewable solutions to energy generation. For these reasons, only minor positive impacts are highlighted.

It should be acknowledged that further positive impacts can be expected to arise from relevant individual LPA Section Two Local Plan policies, which can also respond to requirements for local distinctiveness as required.

5.9.3 Secondary Effects

There will be secondary positive impacts regarding transport related air quality (SO13) through requirements that development prioritise the needs of pedestrians, cyclists and public transport services above use of the private car.

5.9.4 Alternatives Considered

In so far as the place shaping principles of the Policy reiterate sustainable land use requirements as espoused in the NPPF and PPG, it is considered that there are no reasonable alternative approaches that could be considered distinctively different yet still meet tests of soundness. As such the preferred policy approach has been selected.

5.9.5 Proposed Mitigation Measures / Recommendations

Policy SP6 could be more explicit as to the requirements of new development in regards to renewable energy generation in strategic scale development opportunities.

There may be some level of conflict between the principle that seeks green and blue infrastructure to be integrated with multi-functional public open space requirements. The incorporation of these should be considered separate requirements, as biodiversity features are unlikely to flourish through human disturbance.

5.10 Policy SP7 – Development and Delivery of New Garden Communities in Essex

5.10.1 Context / Justification

A key element of the spatial strategy for North Essex is the development of three new large-scale garden communities. At least two of the three garden communities will be cross-boundary, and continued close joint working between the authorities involved will be required to secure their successful delivery. Each of the authorities is committed to ensuring that the new garden communities are as sustainable and high quality as possible and that the infrastructure needed to support them is delivered at the right time. These new communities will accommodate a substantial amount of the housing and employment growth planned for North Essex within the plan period and beyond in a sustainable way that meets the strategic objectives.

The North Essex Garden Communities will be holistically planned new settlements that respond directly to their regional, local and individual site context and opportunities to create developments underpinned by a series of interrelated principles which are based on the Town and Country Planning Association (TCPA) Garden City Principles, adapted for the specific North Essex context.

Whilst Uttlesford District Council is in a separate housing market area and are therefore not part of this Strategic Plan for North Essex, there will continue to be ongoing discussions regarding the extent of the garden community at West of Braintree. The Uttlesford Issues and Options Plan published in October 2015 included an area of search to the west of Braintree. Uttlesford District Council is proposing to undertake preferred options consultation on its Local Plan in the summer of 2017. It should also be noted that the Uttlesford Local Plan SA has adopted a compatible and aligned assessment framework in accordance with the methodology used in this SA.

It should be noted that the appraisal of Policy SP7 should not be taken as that of the Garden Communities themselves. The appraisal of the Garden Communities, alongside reasonable alternatives, is included later in this report. The appraisal of Policy SP7 explores whether the impacts and issues raised in the assessment of the Garden Communities are addressed in the policy in way of mitigation or avoidance as a requirement of any successful planning application, as well as including any general aspirations in line with the Sustainability Objectives.

The policy is as follows:

Policy SP7 – Development and Delivery of New Garden Communities in Essex

The following three new garden communities are proposed in North Essex.

- **Tendring/Colchester Borders**, a new garden community will deliver 2,500 homes within the Plan period (as part of an overall total of between 7,000-9,000 homes to be delivered beyond 2033)
- **Colchester/Braintree Borders**, a new garden community will deliver 2,500 within the Plan period (as part of an overall total of between 15,000 – 24,000 homes to be delivered beyond 2033)
- **West of Braintree in Braintree DC**, a new garden community will deliver 2,500 homes within the Plan period (as part of an overall total of between 7,000- 10,000 homes to be delivered beyond 2033)

Each of these will be an holistically and comprehensively planned new community with a distinct identity that responds directly to its context and is of sufficient scale to incorporate a range of homes, employment, education & community facilities, green space and other uses to enable residents to meet the majority of their day-to-day needs, reducing the need for outward commuting. Delivery of each new community will be phased and underpinned by a comprehensive package of infrastructure.

The Councils will need to be confident, before any consent is granted, that the following requirements have been secured either in the form of appropriate public ownership, planning agreements and obligations and, if necessary a local infrastructure tariff.

The design, development and phased delivery of each new garden community will conform with the following principles

- i. **Community and stakeholder empowerment in the design and delivery of each garden community from the outset and a long-term community engagement and activation strategy**
- ii. **The public sector working pro-actively and collaboratively with the private sector to design, and bring forward these garden communities, deploying new models of delivery, sharing risk and reward and ensuring that the cost of achieving the following is borne by landowners and those promoting the developments: (a) securing a high-quality of place-making, (b) ensuring the timely delivery of both on-site and off-site infrastructure required to address the impact of these new communities, and (c) providing and funding a mechanism for future stewardship, management, maintenance and renewal of community infrastructure and assets. Given the scale of and time period for development of these new garden communities, the appropriate model of delivery will secure a comprehensive**

approach to the delivery of each new community in order to achieve the outcomes outlined above, avoid a piecemeal approach to development, provide the funding and phasing of both development and infrastructure, and be sustainable and accountable in the long term.

- iii. Promotion and execution of the highest quality of planning, design and management of the built and public realm so that the Garden Communities are characterised as distinctive places that capitalise on local assets and establish environments that promote health, happiness and well-being. This will involve developing a cascade of design guidance including concept frameworks, detailed masterplans and design codes and other guidance in place to inform and guide development proposals and planning applications. Planning applications and any local development orders or other consenting mechanisms for the garden communities will be expected to be consistent with approved design guidance
- iv. Sequencing of development and infrastructure provision (both on-site and off-site) to ensure that the latter is provided ahead of or in tandem with the development it supports to address the impacts of the new garden communities, meet the needs of residents and establish sustainable travel patterns.
- v. Development that provides for a truly balanced and inclusive community and meets the housing needs of local people including a mix of dwelling sizes, tenures and types including provision for self- and custom-built homes and provision for the aging population; to meet the requirements of those most in need including 30% affordable housing in each garden community.
- vi. Provide and promote opportunities for employment within each new community and within sustainable commuting distance of it
- vii. Plan the new communities around a step change in integrated and sustainable transport systems for the North Essex area that put walking, cycling and rapid public transit networks and connections at the heart of growth in the area, encouraging and incentivising more sustainable active travel patterns
- viii. Structure the new communities to create sociable, vibrant and walkable neighbourhoods with equality of access for all to a range of community services and facilities including health, education, retail, culture, community meeting spaces, multi-functional open space, sports and leisure facilities
- ix. Develop specific garden community parking approaches and standards that help promote the use of sustainable transport and make efficient use of land.
- x. Create distinctive environments which relate to the surrounding environment and that celebrate natural and historic environments and systems, utilise a multi-functional green-grid to create significant networks of new green infrastructure including new country parks at each garden community, provide a high degree of connectivity to existing corridors and networks and enhance biodiversity
- xi. Secure a smart and sustainable approach that fosters climate resilience and a 21st century environment in the design and construction of each garden community to secure net gains in local biodiversity, highest standards of energy efficiency and

innovation in technology to reduce impact of climate change, water efficiency (with the aim of being water neutral in areas of serious water stress), and sustainable waste and mineral management.

Ensure that the costs and benefits of developing a garden community are shared by all landowners, with appropriate measures being put in place to equalise the costs and land contributions

- xii. Consideration of potential on-site mineral resources through a Minerals Resource Assessment as required by the Minerals Planning Authority
- xiii. Establishment at an early stage in the development of the garden communities, of appropriate and sustainable long-term governance and stewardship arrangements for community assets including green space, public realm areas and community and other relevant facilities; such arrangements to be funded by the developments and include community representation to ensure residents have a stake in the long term development, stewardship and management of their community.

These principles are elaborated upon in the North Essex Garden Community Charter.

A Development Plan Document will be developed for each of the garden communities to set out the principles of their design, development and phasing as well as a mechanism to appropriately distribute housing completions to the three Councils and this will be agreed through a Memorandum of Understanding.

5.10.2 Significant and Temporal Effects

Table 16: Impact on Sustainability Objectives: Policy SP7

Temporal Impacts	Sustainability Objectives (SO)														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Short	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Medium	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Long	++	++	++	++	++	++	++	++	+	+	++	+	+	+	0

It should be noted that impacts are only relevant in the long term, associated with Garden Communities coming forward in the latter stages of the Plan period. There will however be significant long term positive impacts associated with the majority of the Sustainability Objectives through the policy requirements and principles.

Areas that do not have significant impacts include renewable energy generation (SO10) and surface water flooding (SO12) where reference is not directly explicit in the policy. In addition, minor impacts will be expected for sustainability objectives related to air quality (SO13), landscapes (SO14) and the historic environment (SO9), although it should be acknowledged that significantly positive impacts and enhancements may not be considered possible associated with new Greenfield development at the scales

proposed. There will also be no impacts on soil and mineral deposits through the general principles of the Garden Communities.

5.10.3 Secondary Effects

The emergence of Garden Communities within the three authorities' area can be expected to have further significant secondary effects on the wider area, associated with the necessary infrastructure provision required of development at that scale. Garden Communities, in line with and in conformity to the general principles set out in the Policy, ensure that the sustainability effects resulting from strategic level growth are maximised for the benefit of new and existing communities.

5.10.4 Alternatives Considered

The requirements are specific to the content of the Strategic Section One for Local Plans and no other alternatives can be considered reasonable. It can be considered that alternatives could only regard different permutations of alternatives explored, in particular those Spatial Strategies and Garden Communities explored within this SA and considered in the plan-making process. As such the preferred policy approach has been selected.

5.10.5 Proposed Mitigation Measures / Recommendations

No mitigation measures or recommendations are proposed at this stage.

5.11 Policy SP8 – Tendring / Colchester Borders Garden Community

5.11.1 Context / Justification

The preferred scale and range of land uses for the Tendring / Colchester Borders Garden Community are set out in the following policy in addition to specific principles and requirements that have been identified as needing incorporation into a forthcoming masterplan and Garden Community specific DPD.

The SA of this Policy serves to explore whether the range of requirements are suitable to address those sustainability concerns raised in the appraisal of the Garden Community later in this report,

It should be noted that the appraisal of Policy SP8 should not be taken as that of the Garden Community itself. The appraisal of the Garden Communities, alongside reasonable alternatives, is included later in this report. The appraisal of Policy SP8 explores whether the impacts and issues raised in the assessment of the Garden Community are addressed in the policy in way of mitigation or avoidance as a requirement of any successful planning application, as well as including any general aspirations in line with the Sustainability Objectives and Garden City Principles.

The policy is as follows:

Policy SP8 – Tendring / Colchester Borders Garden Community

The adopted policies map identifies the broad location for the development of a new garden community of which the details and final number of homes will be set out in a Strategic Growth Development Plan Document to be prepared jointly between Colchester BC and Tendring DC and which will incorporate around 2,500 dwellings within the Plan period (as part of an overall total of between 7,000-9,000 homes) and provision for Gypsy and Travellers.

The Strategic Growth DPD will set out the nature, form and boundary of the new community. The document will be produced in consultation with stakeholders and will include a concept plan showing the disposition and quantity of future land-uses, and give a three dimensional indication of the urban design and landscape parameters which will be incorporated into any future planning applications; together with a phasing and implementation strategy which sets out how the rate of development will be linked to the provision of the necessary social, physical and environmental infrastructure to ensure that the respective phases of the development do not come forward until the necessary infrastructure has been secured. The DPD will provide the framework for the subsequent development of more detailed masterplans and other design and planning guidance for the Tendring / Colchester Borders Garden Community.

The DPD and any planning application will address the following principles and requirements in the design, development and delivery of the new garden community:

A. Place-making and design quality

1. The development of a new garden community to high standards of design and layout drawing on its context and the considerable assets within its boundaries such as woodland, streams and changes in topography, as well as the opportunities afforded by the proximity of the University of Essex campus to create a new garden community that is innovative, contemporary and technologically enabled, set within a strong green framework with new neighbourhood centres at its heart. It will be designed and developed to have its own identity and be as self-sustaining as possible recognising its location close to the edge of Colchester. It will secure appropriate integration with Colchester and the nearby University of Essex campus by the provision of suitable walking and cycling links and rapid public transport systems and connections to enable residents of the new community to have convenient access to town centre services and facilities in Colchester as well as Elmstead Market. Clear separation will be maintained between the new garden community and the nearby villages of Elmstead Market and Wivenhoe.
2. Detailed masterplans and design guidance will be put in place to inform and guide development proposals and planning applications. Planning applications for this garden community will be expected to be consistent with approved DPDs and subsequent masterplans and design and planning guidance.

B. Housing

3. A mix of housing types and tenures including self- and custom-build and starter homes will be provided on the site, including a minimum of 30% affordable housing. The affordable housing will be phased through the development;
4. New residential development will seek to achieve appropriate densities which reflect both context, place-making aspirations and opportunities for increased levels of development around neighbourhood centres and transport hubs.

C. Employment and jobs

5. Provision for a wide range of job, skills and training opportunities will be created in the garden community. This may include B1 and/or non B class employment generating uses towards the south of the site in proximity to the existing University of Essex and Knowledge Gateway and provision for B1, B2 and B8 businesses to the north of the site close to the A120;
6. High speed and reliable broadband will be provided and homes will include specific spaces to enable working from home.

D. Transportation

7. A package of measures will be introduced to encourage smarter transport choices to meet the needs of the new community and maximise the opportunities for sustainable travel including the provision of a network of footpaths, cycleways and bridleways to enhance permeability within the site and to access and to access the adjoining areas; development of a public rapid transit system connecting the garden community to Essex University and Colchester town centre; park and ride facilities and other effective integrated measures to mitigate the transport impacts of the proposed development on the strategic and local road network. Longer term transport interventions will need to be carefully designed to minimise the impacts on the strategic and local road network and fully mitigate any environmental or traffic impacts arising from the development. These shall include bus (or other public transit provisions) priority measures between the site, University of Essex, Hythe station and Colchester Town Centre;
8. Foot and cycle ways shall be provided throughout the development and connecting with the surrounding urban areas and countryside, including seamlessly linking key development areas to the University of Essex, Hythe station and Colchester Town Centre;
9. Primary vehicular access to the site will be provided off the A120 and A133.
10. Other specific transport-related infrastructure requirements identified through the Strategic Growth Development Plan Document and masterplans for this garden community will be delivered in a phased manner.

E. Community Infrastructure

11. District and neighbourhood centres of an appropriate scale will be provided to serve the proposed development. The centres will be located where they will be

easily accessible by walking, cycling and public transit to the majority of residents in the garden community.

12. Community meeting places will be provided within the local centres.
13. Primary healthcare facilities will be provided to serve the new development
14. A secondary school, primary schools and early-years facilities will be provided to serve the new development;
15. A network of multi-functional green infrastructure will be provided within the garden community incorporating key elements of the existing green assets within the site. It will include community parks , allotments, a new country park, the provision of sports areas with associated facilities; and play facilities;
16. Indoor leisure and sports facilities will be provided with the new community, or contributions made to the improvement of off-site leisure facilities to serve the new development

F. Other Requirements

17. Provision of improvements to waste water treatment including an upgrade to the Colchester Waste Water Treatment Plant and off-site drainage improvements;
18. Provision, management and on-going maintenance of sustainable surface water drainage measures to manage and mitigate the risk of flooding on site and which will reduce the risk of flooding to areas downstream or upstream of the development;
19. Landscape buffers between the site and existing development in Colchester, Wivenhoe and Elmstead Market;
20. Protection and/or enhancement of heritage and biodiversity assets within and surrounding the site;
21. Provision of appropriate buffers along strategic road and rail infrastructure to protect new development
22. Provision of appropriate design and infrastructure that incorporates the highest standards of innovation in energy efficiency and technology to reduce impact of climate change, water efficiency (with the aim of being water neutral in areas of serious water stress), and sustainable waste / recycling management facilities.
23. Measures to support the development of the new community including provision of community development support workers (or other provision) for a minimum of ten years from initial occupation of the first homes and appropriate community governance structures
24. Establishment at an early stage in the development of the garden community, of appropriate and sustainable long-term governance and stewardship arrangements for community assets including green space, public realm areas and community and other relevant facilities; such arrangements to be funded by the development and include community representation to ensure residents have a stake in the

long term development, stewardship and management of their community.

5.11.2 Significant and Temporal Effects

Please note that the following appraisal explores the compatibility of the principles of the policy with the Garden City principles in terms of compatibility. In addition, the appraisal of this policy has been considered in light of the appraisal of the specific Garden Community at Tendring / Colchester later in this report. This is in order to determine whether the policy principles are appropriate in light of that initial appraisal and any sustainability issues identified. It should be noted however that some constraint-based criteria need not be the focus of the principles of the development in the absence of any identified issues and in addition general themes are ensured through the content of Policy SP7. In those instances, 'N/A' has been highlighted.

Table 17: Impact on Sustainability Objectives: Policy SP8

Objective	Corresponding Garden City Principle(s) and any additional considerations	Impact
1. Physical Limitations	- Absence of insurmountable problems (ground conditions, flood risk, hazardous risks, pollution, contamination and air quality)	N/A
	- Incorporation of SuDS.	++
2. Impacts	- Reflect a fusion of the best of the past while embracing new materials and the needs of modern living	N/A
	- Acceptable impacts only on sites of nature conservation interest.	++
	- A surrounding belt of countryside to prevent sprawl, well connected and biodiversity rich public parks, and a mix of public and private networks of well-managed, high-quality gardens, tree-lined streets and open spaces.	++
	- Acceptable impacts only on high quality agricultural land, important landscape features.	+
3. Environment / Amenity	- Acceptable relationship only with and impact on occupiers of existing properties and neighbouring areas / towns (maintaining adequate separation)	++
4. Transport	- New Garden Cities should be located only where there are existing rapid public transport links to major cities, or where real plans are already in place for its provision.	++
	- Walking, cycling and public transport should be the most attractive and prioritised forms of transport in the garden city.	++
	- Ensure a comprehensive and safe network of footpaths and cycleways throughout the development, and public transport nodes within a short walking distance of all homes.	++

Objective	Corresponding Garden City Principle(s) and any additional considerations	Impact
	- Where car travel is necessary, consideration should be made of shared transport approaches such as car clubs.	N/A
5. Resilience	- Positive contribution towards town centres.	++
	- Positive contribution towards identified regeneration priority areas and institutions	++
6. Housing	- Garden Cities (should be) part of a wider strategic approach to meeting the nation's housing needs.	++
	- An appropriate number homes in a new Garden City must be 'affordable' for ordinary people.	++
	- Provide mixed-tenure homes and housing types that are genuinely affordable for everyone	++
	- An appropriate percentage of the homes that are classified as 'affordable' must be for social rent.	?
	- Consider life-time homes and the needs of particular social groups, such as the elderly.	+
	- A range of housing types including self-build / custom build and gypsy and traveller pitches	++
	- Aspire to the very best domestic and commercial architecture with sensitivity to local vernacular design and materials.	N/A
	- New Garden Cities should include opportunities for people to build their own home (either alone or collectively), and set aside land for future community needs.	++
7. Employment Opportunities	- New Garden Cities must provide a full range of employment opportunities, with the aim of no less than one job per new household.	++
	- There should be a robust range of employment opportunities in the Garden City itself, with a variety of jobs within easy commuting distance of homes.	++
8. Mixed-use Opportunities	- Inclusion of cultural, recreational and shopping facilities in walkable, vibrant, sociable neighbourhoods	++
9. Environmental Quality &	- Create shared spaces for social interaction and space for both formal and informal artistic activities, as well as sport and leisure activities.	++

Objective	Corresponding Garden City Principle(s) and any additional considerations	Impact
Sustainability	- Strong emphasis should be placed on homes with gardens and on space for both allotments and community gardens and orchards to provide for healthy local food.	++
	- Garden Cities are places of cultural diversity and vibrancy with design contributing to sociable neighbourhoods. This means, for example, shaping design with the needs of children's play, teenage interests and the aspirations of elderly in mind.	++
	- Net gain to biodiversity is secured through master plans which link generous private and community gardens with wider public green and blue space and ultimately with strategic networks of green infrastructure and habitat creation.	++
	- Garden Cities must demonstrate the highest standards of technological innovation in zero carbon and energy positive technology to reduce the impact of climate emissions.	++
	- In building standards, a requirement for innovation beyond zero carbon and in the use of materials and construction techniques.	++
10. Developability / Deliverability	- Ensure that the development can self-fund infrastructure costs	++
	- Be commercially attractive with strong market conditions and value potential	++
	- Availability of land being put forward for development with active landowner/developer interest	++
	- Scope for delivery structures through active and positive public and private sector engagement	++

There will be significant positive impacts associated with the majority of the Garden City principles, in consideration of the policy and the appraisal of the preferred Garden Community option at the Tendring / Colchester Borders. It should be noted that impacts are only relevant in the long term, associated with Garden Communities coming forward in the latter stages of the Plan period. This includes the impact on the regeneration areas within Colchester town centre and to the east of the town, due largely to the Policy content; in particular those related to sustainable transport, in conjunction with the general location of the option.

An example where the policy will not ensure significant positive impacts against the Garden City Principles however relates to the aspiration that an appropriate percentage of homes that are classified as 'affordable' be for social rent. In addition, the policy is not explicit in a need to consider life-time homes, however does imply provision, including requirements for a mix of housing types and tenures and provision for Gypsies and Travellers accommodation.

Although there will be a loss of agricultural land, positive impacts regarding landscapes have been highlighted in response to the policy ensuring that development is of a high standard of design and layout, drawing on its context and considerable assets in this regard. The development of a Garden Community in this location, and with the specific policy principles regarding landscape, can be seen to ensure that the best

possible development outcomes are achieved in this broad area.

5.11.3 Secondary Effects

The emergence of this Garden Community can be expected to have further significant secondary effects on the wider area, associated with the necessary infrastructure provision required of development at that scale. The Garden Community, in line with and in conformity to the general principles set out in the Policy and Policy SP7, ensure that the sustainability effects resulting from strategic level growth are maximised for the benefit of new and existing communities.

5.11.4 Alternatives Considered

The principles and requirements of this Policy are specific to the Garden Community, to which this policy relates, ensuring that aspirations surrounding sustainable development will be met from any successful proposal. In so far as the Policy ensures sustainable development, it accords directly to the presumption in favour of sustainable development of Policy SP1 and more critically, the NPPF. As such no other alternatives can be considered reasonable and the preferred policy approach has been selected.

5.11.5 Proposed Mitigation Measures / Recommendations

No mitigation measures or recommendations are proposed.

5.12 Policy SP9 – Colchester / Braintree Borders Garden Community

5.12.1 Context / Justification

The preferred scale and range of land uses for the Colchester / Braintree Borders Garden Community are set out in the following policy in addition to specific principles and requirements that have been identified as needing incorporation into a forthcoming masterplan and Garden Community specific DPD.

It should be noted that the appraisal of Policy SP9 should not be taken as that of the Garden Community itself. The appraisal of the Garden Communities, alongside reasonable alternatives, is included later in this report. The appraisal of Policy SP9 explores whether the impacts and issues raised in the assessment of the Garden Community are addressed in the policy in way of mitigation or avoidance as a requirement of any successful planning application, as well as including any general aspirations in line with the Sustainability Objectives and Garden City Principles.

The policy is as follows:

Policy SP9 – Colchester / Braintree Borders Garden Community

The adopted policies map identifies a strategic area for development of a new garden community of which the details and final number of homes will be set out in a Strategic Growth Development Plan Document to be prepared jointly between Colchester BC and Braintree DC and which will incorporate provision of around 2,500 dwellings within the Plan period (as part of an overall total of between 15,000 to 24,000 homes) and provision for Gypsy and Travellers.

The Strategic Growth DPD will set out the nature, form and boundary of the new community. The document will be produced in consultation with stakeholders and will include a concept plan showing the disposition and quantity of future land-uses, and give a three dimensional indication of the urban design and landscape parameters which will be incorporated into any future planning applications; together with a phasing and implementation strategy which sets out how the rate of development will be linked to the provision of the necessary social, environmental and physical infrastructure to ensure that the respective phases of the development do not come forward until the necessary infrastructure has been secured. The DPD will provide the framework for the subsequent development of more detailed masterplans and other design and planning guidance for the Colchester/Braintree Borders Garden Community.

The DPD and any planning application will address the following principles and requirements in the design, development and delivery of the new garden community:

A. Place-making and design quality

1. The development of a new garden community to high standards of design and layout drawing on its context and the assets within its boundaries including streams, land drains and ditches, mature hedgerows and field boundaries, woodland, existing and re-established habitats, and historic buildings. A mixed

use district centre will provide a vibrant heart to this new community supplemented by neighbourhood centres to form foci for new neighbourhoods. The design of the community will also address the challenges offered by other features in particular the severance created by the A12 and A120 and maximise the opportunities afforded through integration with the existing community of Marks Tey, and the presence of the railway station, all underpinned by a strong green-grid of connected green space that provides great recreational opportunities for residents and connection to the wider countryside. The garden community will be designed and developed to have its own identity and be as self-sustaining as possible. Clear separation will be maintained between the new garden community and the nearby settlements of Coggeshall, Stanway Easthorpe and Feering.

2. Detailed masterplans and design guidance will be put in place to inform and guide development proposals and planning applications. Planning applications for this garden community will be expected to be consistent with approved DPDs and subsequent masterplans and design and planning guidance.

B. Housing

3. A mix of housing types and tenures including self- and custom-build and affordable housing will be provided on the site, including a minimum of 30% affordable housing. The affordable housing will be phased through the development;
4. New residential development will seek to achieve appropriate densities which reflect both context, place-making aspirations and opportunities for increased levels of development around neighbourhood centres and transport hubs.

C. Employment and jobs

5. Employment – additional wording pending further evidence base findings. Provision for a wide range of job, skills and training opportunities will be created in the garden community. This may include B1 and/or non B class employment generating uses around the rail station as part of mixed use urban development to provide for a wide range of local employment opportunities where appropriate;
6. High speed and reliable broadband will be provided and homes will include specific spaces to enable working from home

D. Transportation

7. A package of measures will be introduced to encourage smarter transport choices to meet the needs of the new community and maximise the opportunities for sustainable travel including the provision of a network of footpaths, cycleways and bridleways to enhance permeability within the site and to access the adjoining area; development of a public rapid transit system connecting this new garden community to the wider Colchester context; development of opportunities to improve accessibility to Marks Tey rail station (or provide for its relocation to a more central location within the garden community); and effective measures to mitigate the transport impacts of the proposed development on the strategic and local road network. Longer term transport interventions will need to be carefully

designed to minimise the impacts on the strategic road network and fully mitigate any environmental or traffic impacts. Other specific transport-related infrastructure requirements identified through the subsequent Strategic Growth Development Plan Document and masterplans for this garden community will be delivered in a phased manner

8. Primary vehicular access to the site will be provided via the strategic road network.
9. Improvements to the local road infrastructure will be necessary to mitigate adverse traffic impacts and serve the new development. These shall include bus/rapid transit priority measures between the site, Colchester and Braintree town centres, employment areas and rail stations;
10. Foot and cycle ways shall be provided throughout the development and existing communities and surrounding countryside, including seamlessly linking key development areas to the wider network
11. Opportunities will be explored to establish how Marks Tey rail station can be made more accessible to residents of the new community including relocation of the station to a more central location and improvement of walking, cycling and public transport links to the station.

E. Community Infrastructure

12. District and local centres of an appropriate scale will be provided to serve the proposed development. The centres will be located where they will be easily accessible by walking, cycling and public transit to the majority of residents in the garden community including residents of the existing Marks Tey village.
13. Community meeting places will be provided within the district and local centres.
14. Primary healthcare facilities will be provided to serve the new development
15. At least one secondary school, primary schools and early-years facilities will be provided to serve the new development;
16. A network of multi-functional green infrastructure will be provided within the garden community incorporating key elements of the existing green assets within the site. It will include community parks, allotments, a new country park and the provision of sports areas with associated facilities and play facilities;
17. Indoor leisure and sports facilities will be provided with the new community, or contributions made to the improvement of off-site leisure facilities to serve the new development

F. Other Requirements

18. Provision of improvements to waste water treatment including an upgrade to the Colchester Waste Water Treatment Plant and off-site drainage improvements;
19. Provision, management and on-going maintenance of sustainable surface water drainage measures to manage and mitigate the risk of flooding on site and which

will reduce the risk of flooding to areas downstream or upstream of the development;

20. Landscape buffers between the site and Coggeshall, Feering, Stanway and Easthorpe;
21. Protection and/or enhancement of heritage and biodiversity assets within and surrounding the site including the SSSI at Marks Tey brick pit, Marks Tey Hall, Easthorpe Hall Farm, Easthorpe Hall and the habitats along and adjoining the Domsey Brook and Roman River corridors.
22. Provision of appropriate buffers along strategic road and rail infrastructure to protect new development
23. Provision of appropriate design and infrastructure that incorporates the highest standards of innovation in energy efficiency and technology to reduce impact of climate change, water efficiency (with the aim of being water neutral in areas of serious water stress), and sustainable waste / recycling management facilities.
24. Measures to support the development of the new community including provision of community development support workers (or other provision) for a minimum of ten years from initial occupation of the first homes and appropriate community governance structures
25. Establishment at an early stage in the development of the garden community, of appropriate and sustainable long-term governance and stewardship arrangements for community assets including green space, public realm areas and community and other relevant facilities; such arrangements to be funded by the development and include community representation to ensure residents have a stake in the long term development, stewardship and management of their community.

Please note that the following appraisal explores the compatibility of the principles of the policy with the Garden City principles in terms of compatibility. In addition, the appraisal of this policy has been considered in light of the appraisal of the specific Garden Community at Colchester / Braintree later in this report. This is in order to determine whether the policy principles are appropriate in light of that initial appraisal and any sustainability issues identified. It should be noted however that some constraint-based criteria need not be the focus of the principles of the development in the absence of any identified issues and in addition general themes are ensured through the content of Policy SP7. In those instances, 'N/A' has been highlighted.

5.12.2 Significant and Temporal Effects

Table 18: Impact on Sustainability Objectives: Policy SP9

Objective	Corresponding Garden City Principle(s) and any additional considerations	Impact
1. Physical Limitations	- Absence of insurmountable problems (ground conditions, flood risk, hazardous risks, pollution, contamination and air quality)	N/A
	- Incorporation of SuDS.	++
2. Impacts	- Reflect a fusion of the best of the past while embracing new materials and the needs of modern living	N/A
	- Acceptable impacts only on sites of nature conservation interest.	++
	- A surrounding belt of countryside to prevent sprawl, well connected and biodiversity rich public parks, and a mix of public and private networks of well-managed, high-quality gardens, tree-lined streets and open spaces.	++
	- Acceptable impacts only on high quality agricultural land, important landscape features.	+
3. Environment / Amenity	- Acceptable relationship only with and impact on occupiers of existing properties and neighbouring areas / towns (maintaining adequate separation)	++
4. Transport	- New Garden Cities should be located only where there are existing rapid public transport links to major cities, or where real plans are already in place for its provision.	++
	- Walking, cycling and public transport should be the most attractive and prioritised forms of transport in the garden city.	++
	- Ensure a comprehensive and safe network of footpaths and cycleways throughout the development, and public transport nodes within a short walking distance of all homes.	++
	- Where car travel is necessary, consideration should be made of shared transport approaches such as car clubs.	N/A
5. Resilience	- Positive contribution towards town centres.	++
	- Positive contribution towards identified regeneration priority areas and institutions	+

Objective	Corresponding Garden City Principle(s) and any additional considerations	Impact
6. Housing	- Garden Cities (should be) part of a wider strategic approach to meeting the nation's housing needs.	++
	- An appropriate number homes in a new Garden City must be 'affordable' for ordinary people.	++
	- Provide mixed-tenure homes and housing types that are genuinely affordable for everyone	++
	- An appropriate percentage of the homes that are classified as 'affordable' must be for social rent.	?
	- Consider life-time homes and the needs of particular social groups, such as the elderly.	+
	- A range of housing types including self-build / custom build and gypsy and traveller pitches	++
	- Aspire to the very best domestic and commercial architecture with sensitivity to local vernacular design and materials.	N/A
	- New Garden Cities should include opportunities for people to build their own home (either alone or collectively), and set aside land for future community needs.	++
7. Employment Opportunities	- New Garden Cities must provide a full range of employment opportunities, with the aim of no less than one job per new household.	++
	- There should be a robust range of employment opportunities in the Garden City itself, with a variety of jobs within easy commuting distance of homes.	++
8. Mixed-use Opportunities	- Inclusion of cultural, recreational and shopping facilities in walkable, vibrant, sociable neighbourhoods	++
9. Environmental Quality & Sustainability	- Create shared spaces for social interaction and space for both formal and informal artistic activities, as well as sport and leisure activities.	++
	- Strong emphasis should be placed on homes with gardens and on space for both allotments and community gardens and orchards to provide for healthy local food.	++
	- Garden Cities are places of cultural diversity and vibrancy with design contributing to sociable neighbourhoods. This means, for example, shaping design with the needs of children's play, teenage interests and the aspirations of elderly in mind.	++

Objective	Corresponding Garden City Principle(s) and any additional considerations	Impact
	- Net gain to biodiversity is secured through master plans which link generous private and community gardens with wider public green and blue space and ultimately with strategic networks of green infrastructure and habitat creation.	++
	- Garden Cities must demonstrate the highest standards of technological innovation in zero carbon and energy positive technology to reduce the impact of climate emissions.	++
	- In building standards, a requirement for innovation beyond zero carbon and in the use of materials and construction techniques.	++
10. Developability / Deliverability	- Ensure that the development can self-fund infrastructure costs	++
	- Be commercially attractive with strong market conditions and value potential	++
	- Availability of land being put forward for development with active landowner/developer interest	++
	- Scope for delivery structures through active and positive public and private sector engagement	++

There will be significant positive impacts associated with the majority of the Garden City principles, in consideration of the policy and the appraisal of the preferred Garden Community option at the Colchester / Braintree Borders. It should be noted that impacts are only relevant in the long term, associated with Garden Communities coming forward in the latter stages of the Plan period.

An example where the policy will not ensure significant positive impacts against the Garden City Principles however relates to the aspiration that an appropriate percentage of homes that are classified as 'affordable' be for social rent. In addition, the policy is not explicit in a need to consider life-time homes, however does include requirements for a mix of housing types and tenures including provision for Gypsies and Travellers.

Although there will be a loss of agricultural land, positive impacts regarding landscapes have been highlighted in response to the policy ensuring that development is of a high standard of design and layout, drawing on its context and considerable assets in this regard. The development of a Garden Community in this location, and with the specific policy principles regarding landscape, can be seen to ensure that the best possible development outcomes are achieved in this broad area.

5.12.3 Secondary Effects

The emergence of this Garden Community can be expected to have further significant secondary effects on the wider area, associated with the necessary infrastructure provision required of development at that scale. The Garden Community, in line with and in conformity to the general principles set out in the Policy and Policy SP7, ensure that the sustainability effects resulting from strategic level growth are maximised for the benefit of new and existing communities.

5.12.4 Alternatives Considered

The principles and requirements of this Policy are specific to the Garden Community, to which this policy relates, ensuring that aspirations surrounding sustainable development will be met from any successful proposal. In so far as the Policy ensures sustainable development, it accords directly to the presumption in favour of sustainable development of Policy SP1 and more critically, the NPPF. As such no other alternatives can be considered reasonable and the preferred policy approach has been selected.

5.12.5 Proposed Mitigation Measures / Recommendations

No mitigation measures or recommendations are proposed.

5.13 Policy SP10 – West of Braintree Garden Community

5.13.1 Context / Justification

The preferred scale and range of land uses for the West of Braintree Garden Community are set out in the following policy in addition to specific principles and requirements that have been identified as needing incorporation into a forthcoming masterplan and Garden Community specific DPD.

It should be noted that the appraisal of Policy SP10 should not be taken as that of the Garden Community itself. The appraisal of the Garden Communities, alongside reasonable alternatives, is included later in this report. The appraisal of Policy SP10 explores whether the impacts and issues raised in the assessment of the Garden Community are addressed in the policy in way of mitigation or avoidance as a requirement of any successful planning application, as well as including any general aspirations in line with the Sustainability Objectives and Garden City Principles.

The policy is as follows:

Policy SP10 – West of Braintree Garden Community

The adopted policies map, identifies a strategic area for development of a new garden community of which the details and final number of homes will be set out in a Strategic Growth Development Plan Document to be prepared jointly between Braintree DC and Uttlesford DC if applicable and which will incorporate provision of around 2,500 homes within the Plan period (as part of an overall total of between 7,000 – 10,000 homes) and provision for Gypsy and Travellers

Broadfield Farm lies within the garden community search area and is an allocated minerals extraction site within the Essex County Council adopted Minerals Local Plan. The mineral extraction, restoration and after care of the minerals site will need to be planned alongside the wider development of the garden community.

The Strategic Growth DPD will set out the nature and form of the new community. The DPD will be produced in consultation with stakeholders will include a concept plan showing the disposition and quantity of future land-uses, and give a three dimensional indication of the urban design and landscape parameters which will be incorporated into any future planning

applications; together with a phasing and implementation strategy which sets out how the rate of development will be linked to the provision of the necessary social and physical infrastructure to ensure that the respective phases of the development do not come forward until the necessary infrastructure has been secured. The DPD will provide the framework for the subsequent development of more detailed masterplans and other design and planning guidance for the West of Braintree Garden Community.

The DPD and any planning application will address the following principles and requirements in the design, development and delivery of the new garden community:

A. Place-making and design quality

1. The development of a new garden community to high standards of design and layout drawing on its context and the assets within and close to its boundaries including Boxted Wood, Golden Grove, Rumley Wood, Pods Brook and the historic airfield. The gently sloping topography to the south of the site also affords opportunities for long distance views. These key assets will provide a context to build a new green-grid upon to provide an attractive setting for the new community and linking to the wider countryside. The new community will also address the relationship with existing communities close to its boundaries and maintain a separation between them including Great Saling, Stebbing Green and Rayne. The garden community will be designed and developed to have its own identity and be as self-sustaining as possible.
2. Detailed masterplans and design guidance will be put in place to inform and guide development proposals and planning applications. Planning applications for this garden community will be expected to be consistent with approved DPDs and subsequent masterplans and design and planning guidance.

B. Housing

3. A mix of housing types and tenures including self- and custom-build and starter homes will be provided on the site, including a minimum of 30% affordable housing. The affordable housing will be phased through the development;
4. New residential development will seek to achieve appropriate densities which reflect context, place-making aspirations and opportunities for increased levels of development around neighbourhood centres and transport hubs.

C. Employment and jobs

5. Employment – additional wording pending further evidence base findings. Provision for a wide range of job, skills and training opportunities will be created within the garden community. This may include space for B1, B2 and B8 businesses in the southern part of the community close to the A120 as well as on non-employment park locations throughout the Garden Community to provide for a wide range of local employment opportunities
6. High speed and reliable broadband will be provided and homes will include specific spaces to enable working from home

D. Transportation

7. A package of measures will be introduced to encourage smarter transport choices to meet the needs of the new community and maximise the opportunities for sustainable travel including the provision of a network of footpaths, cycleways and bridleways to enhance permeability within the site and to access the adjoining area; development of an effective public transport system; development of opportunities to improve accessibility to local rail stations; and effective measures to mitigate the transport impacts of the proposed development on the strategic and local road network. Improvements to the local road infrastructure will be necessary to mitigate adverse traffic impacts and serve the new development. These shall include bus / rapid transit priority measures between the site, Braintree town centre, rail station and employment areas including the Skyline business park and London Stansted Airport. Longer term transport interventions will need to be carefully designed to minimise the impacts on the strategic and local road network and fully mitigate any environmental or traffic impacts arising from the development.
8. Primary vehicular access to the site will be provided via the A120 and B1256.
9. Foot and cycle ways shall be provided throughout the development, including linking the site to Braintree town through the existing Flitch Way linear country park;
10. Other specific transport-related infrastructure requirements identified through the Strategic Growth Development Plan Documents and masterplans for this garden community will be delivered in a phased manner.

E. Community Infrastructure

11. District and local centres of an appropriate scale will be provided to serve the proposed new community. The centres will be located where they will be easily accessible by walking, cycling and public transit to the majority of residents in the garden community.
12. Community meeting places will be provided within the district and local centres.
13. Primary healthcare facilities will be provided to serve the new development.
14. Secondary school, primary schools and early-years facilities will be provided to serve the new development;
15. A network of multi-functional green infrastructure will be provided within the garden community. It will include community parks, allotments, the provision of sports areas with associated facilities and play facilities;
16. Indoor leisure and sports facilities will be provided with the new community, or contributions made to the improvement of off-site leisure facilities to serve the new development.

F. Other Requirements

17. Provision of improvements to waste water treatment and off-site drainage improvements;

18. Provision, management and on-going maintenance of sustainable surface water drainage measures to manage and mitigate the risk of flooding on site and which will reduce the risk of flooding to areas downstream or upstream of the development;
19. Landscape buffers between the site and Great Saling, Stebbing, Stebbing Green and Rayne;
20. Protection and/or enhancement of heritage and biodiversity assets within and surrounding the site including Great Saling Hall conservation area and areas of deciduous woodland within and adjoining the site.
21. Provision of appropriate buffers along strategic road infrastructure to protect new development
22. Provision of appropriate design and infrastructure that incorporates the highest standards of energy efficiency and innovation in technology to reduce impact of climate change, water efficiency (with the aim of being water neutral in areas of serious water stress), and sustainable waste / recycling management facilities.
23. Measures to support the development of the new community including provision of community development support workers (or other provision) for a minimum of ten years from initial occupation of the first homes and appropriate community governance structures
24. Establishment at an early stage in the development of the garden community, of appropriate and sustainable long-term governance and stewardship arrangements for community assets including green space, public realm areas and community and other relevant facilities; such arrangements to be funded by the development and include community representation to ensure residents have a stake in the long term development, stewardship and management of their community.

5.13.2 Significant and Temporal Effects

Please note that the following appraisal explores the compatibility of the principles of the policy with the Garden City principles in terms of compatibility. In addition, the appraisal of this policy has been considered in light of the appraisal of the specific Garden Community at West of Braintree later in this report. This is in order to determine whether the policy principles are appropriate in light of that initial appraisal and any sustainability issues identified. It should be noted however that some constraint-based criteria need not be the focus of the principles of the development in the absence of any identified issues and in addition general themes are ensured through the content of Policy SP7. In those instances, 'N/A' has been highlighted.

Table 19: Impact on Sustainability Objectives: Policy SP10

Objective	Corresponding Garden City Principle(s) and any additional considerations	Impact
1. Physical Limitations	- Absence of insurmountable problems (ground conditions, flood risk, hazardous risks, pollution, contamination and air quality)	N/A
	- Incorporation of SuDS.	++
2. Impacts	- Reflect a fusion of the best of the past while embracing new materials and the needs of modern living	N/A
	- Acceptable impacts only on sites of nature conservation interest.	++
	- A surrounding belt of countryside to prevent sprawl, well connected and biodiversity rich public parks, and a mix of public and private networks of well-managed, high-quality gardens, tree-lined streets and open spaces.	++
	- Acceptable impacts only on high quality agricultural land, important landscape features.	+
3. Environment / Amenity	- Acceptable relationship only with and impact on occupiers of existing properties and neighbouring areas / towns (maintaining adequate separation)	++
4. Transport	- New Garden Cities should be located only where there are existing rapid public transport links to major cities, or where real plans are already in place for its provision.	++
	- Walking, cycling and public transport should be the most attractive and prioritised forms of transport in the garden city.	++
	- Ensure a comprehensive and safe network of footpaths and cycleways throughout the development, and public transport nodes within a short walking distance of all homes.	++
	- Where car travel is necessary, consideration should be made of shared transport approaches such as car clubs.	N/A
5. Resilience	- Positive contribution towards town centres.	++
	- Positive contribution towards identified regeneration priority areas and institutions	+
6. Housing	- Garden Cities (should be) part of a wider strategic approach to meeting the nation's housing needs.	++

Objective	Corresponding Garden City Principle(s) and any additional considerations	Impact
	- An appropriate number homes in a new Garden City must be 'affordable' for ordinary people.	++
	- Provide mixed-tenure homes and housing types that are genuinely affordable for everyone	++
	- An appropriate percentage of the homes that are classified as 'affordable' must be for social rent.	?
	- Consider life-time homes and the needs of particular social groups, such as the elderly.	+
	- A range of housing types including self-build / custom build and gypsy and traveller pitches	++
	- Aspire to the very best domestic and commercial architecture with sensitivity to local vernacular design and materials.	N/A
	- New Garden Cities should include opportunities for people to build their own home (either alone or collectively), and set aside land for future community needs.	++
7. Employment Opportunities	- New Garden Cities must provide a full range of employment opportunities, with the aim of no less than one job per new household.	++
	- There should be a robust range of employment opportunities in the Garden City itself, with a variety of jobs within easy commuting distance of homes.	++
8. Mixed-use Opportunities	- Inclusion of cultural, recreational and shopping facilities in walkable, vibrant, sociable neighbourhoods	++
9. Environmental Quality & Sustainability	- Create shared spaces for social interaction and space for both formal and informal artistic activities, as well as sport and leisure activities.	++
	- Strong emphasis should be placed on homes with gardens and on space for both allotments and community gardens and orchards to provide for healthy local food.	++
	- Garden Cities are places of cultural diversity and vibrancy with design contributing to sociable neighbourhoods. This means, for example, shaping design with the needs of children's play, teenage interests and the aspirations of elderly in mind.	++
	- Net gain to biodiversity is secured through master plans which link generous private and community gardens with wider public green and blue space and ultimately with strategic networks of green infrastructure and habitat creation.	++

Objective	Corresponding Garden City Principle(s) and any additional considerations	Impact
	- Garden Cities must demonstrate the highest standards of technological innovation in zero carbon and energy positive technology to reduce the impact of climate emissions.	++
	- In building standards, a requirement for innovation beyond zero carbon and in the use of materials and construction techniques.	++
10. Developability / Deliverability	- Ensure that the development can self-fund infrastructure costs	++
	- Be commercially attractive with strong market conditions and value potential	++
	- Availability of land being put forward for development with active landowner/developer interest	++
	- Scope for delivery structures through active and positive public and private sector engagement	++

There will be significant positive impacts associated with the majority of the Garden City principles, in consideration of the policy and the appraisal of the preferred Garden Community option at the West of Braintree. It should be noted that impacts are only relevant in the long term, associated with Garden Communities coming forward in the latter stages of the Plan period.

An example where the policy will not ensure significant positive impacts against the Garden City Principles however relates to the aspiration that an appropriate percentage of homes that are classified as 'affordable' be for social rent. In addition, the policy is not explicit in a need to consider life-time homes, however does include requirements for a mix of housing types and tenures including provision for Gypsies and Travellers.

Although there will be a loss of agricultural land, positive impacts regarding landscapes have been highlighted in response to the policy ensuring that development is of a high standard of design and layout, drawing on its context and considerable assets in this regard. The development of a Garden Community in this location, and with the specific policy principles regarding landscape, can be seen to ensure that the best possible development outcomes are achieved in this broad area.

5.13.3 Secondary Effects

The emergence of this Garden Community can be expected to have further significant secondary effects on the wider area, associated with the necessary infrastructure provision required of development at that scale. The Garden Community, in line with and in conformity to the general principles set out in the Policy and Policy SP7, ensure that the sustainability effects resulting from strategic level growth are maximised for the benefit of new and existing communities.

5.13.4 Alternatives Considered

The principles and requirements of this Policy are specific to the Garden Community, to which this policy relates, ensuring that aspirations surrounding sustainable development will be met from any successful



proposal. In so far as the Policy ensures sustainable development, it accords directly to the presumption in favour of sustainable development of Policy SP1 and more critically, the NPPF. As such, the Policy was selected and no other alternatives can be considered reasonable.

5.13.5 Proposed Mitigation Measures / Recommendations

No mitigation measures or recommendations are proposed.

6. Cumulative and Synergistic Impacts of Section One Policies

6.1 Cumulative and Synergistic Impacts of Policies SP1-SP7

This section explores the cumulative and synergistic impacts of the Strategic Section One for Local Plan's policies SP1-SP7. These policies have been grouped for this purpose as they respond to strategic policy content as opposed to the more site specific content of Policies SP8-SP10. Cumulative impacts are identified per sustainability objective, with each option exploring whether any exist on a thematic basis.

6.1.1 Sustainability Objective 1: Create safe environments which improve quality of life, community cohesion

Policy	Impact on SO1
SP1: Presumption in Favour of Sustainable Development	+
SP2: Spatial Strategy for North Essex	+
SP3: Meeting Housing Needs	N/A
SP4: Providing for Employment and Retail	N/A
SP5: Infrastructure and Connectivity	N/A
SP6: Place Shaping Principles	++
SP7: Development and Delivery of New Garden Communities in Essex	++
Cumulative Impact	0

The Strategic Section One for Local Plans' policy content, including the Spatial Strategy of SP2, can be seen to have positive impacts on this objective where relevant. There will however be no cumulative impacts associated with this objective, where the objective is more closely concerned with on-site design features and development principles or guidelines.

6.1.2 Sustainability Objective 2: To ensure that everyone has the opportunity to live in a decent, safe home which meets their needs at a price they can afford

Policy	Impact on SO2
SP1: Presumption in Favour of Sustainable Development	+
SP2: Spatial Strategy for North Essex	++
SP3: Meeting Housing Needs	++
SP4: Providing for Employment and Retail	N/A
SP5: Infrastructure and Connectivity	N/A
SP6: Place Shaping Principles	N/A
SP7: Development and Delivery of New Garden Communities in Essex	++
Cumulative Impact	++

There can be expected to be a cumulative strengthening of impacts ensuring good quality and inclusive homes through similarly ensuring that objectively assessed housing can be met throughout Local Plan periods within North Essex, particularly in the latter stages and in accordance with each LPA's individual requirements. The preferred strategic Spatial Strategy also conforms to as broad a geographic dispersal as possible across the North Essex area in light of available land and promoted sites. The Strategic Section One for Local Plans, in exploring options and solutions for meeting unmet elements of objectively assessed need over the strategic area will also ensure significant positive cumulative impacts on this objective in accumulation with the individual Spatial Strategies of each authority's Local Plan, including elements of non-strategic needs, and as per the LPA level requirements of the OAN Report.

6.1.3 Sustainability Objective 3: To improve the health of the District's residents and mitigate/reduce potential health inequalities

Policy	Impact on SO3
SP1: Presumption in Favour of Sustainable Development	+
SP2: Spatial Strategy for North Essex	++
SP3: Meeting Housing Needs	N/A
SP4: Providing for Employment and Retail	N/A
SP5: Infrastructure and Connectivity	++
SP6: Place Shaping Principles	+
SP7: Development and Delivery of New Garden Communities in Essex	++
Cumulative Impact	++

There will be significantly positive health impacts associated with the cumulative effects of the Strategic Section One for Local Plans' policies and commitment to delivering Garden Communities. This is largely due to a combination of health related infrastructure provision and also adherence to Garden City Principles regarding walking and cycling infrastructure and the provision of open space and recreational facilities. There will also be cumulative positive impacts in this regard associated with the content of each authority's Local Plan policies and designation of non-strategic open space and recreation.

6.1.4 Sustainability Objective 4: To ensure and improve the vitality & viability of centres

Policy	Impact on SO4
SP1: Presumption in Favour of Sustainable Development	+
SP2: Spatial Strategy for North Essex	++
SP3: Meeting Housing Needs	N/A
SP4: Providing for Employment and Retail	0
SP5: Infrastructure and Connectivity	++
SP6: Place Shaping Principles	+
SP7: Development and Delivery of New Garden Communities in Essex	++
Cumulative Impact	++

There will be significant cumulative impacts on the town centres of Colchester and Braintree in line with the various policies. The Spatial Strategy will seek to locate development within such centres in the short-medium term, with long term benefits being experienced in the long term through better infrastructure and connectivity associated with the Garden Communities, particularly regarding public transport networks. There will also be significant positive impacts associated with the individual Section Twos of the Local Plans of Colchester and Braintree. The locations of the Garden Communities are unlikely to support the town centres of Clacton and Harwich within Tendring, other than for seasonal tourism, however it should be noted that a large amount of non-strategic (within the context of the Section One) development is allocated in such centres within the Tendring District Council Local Plan Section Two, particularly in the Clacton area.

6.1.5 Sustainability Objective 5: To achieve a prosperous and sustainable economy that creates new jobs, improves the vitality and viability of centres and captures the economic benefits of international gateways

Policy	Impact on SO5
SP1: Presumption in Favour of Sustainable Development	+
SP2: Spatial Strategy for North Essex	++
SP3: Meeting Housing Needs	N/A
SP4: Providing for Employment and Retail	++
SP5: Infrastructure and Connectivity	++
SP6: Place Shaping Principles	N/A
SP7: Development and Delivery of New Garden Communities in Essex	++
Cumulative Impact	++

As per those iterated for Sustainability Objective 2, there can be expected to be a cumulative strengthening of requirements to ensure job creation through similarly ensuring that employment requirements can be met throughout Local Plan periods within North Essex, particularly in the latter stages and in accordance with each LPA's individual requirements. The preferred strategic Spatial Strategy also conforms to as broad a geographical dispersal as possible across North Essex in light of available land and promoted sites. The Strategic Section One for Local Plans will also ensure significant positive cumulative impacts on this objective in accumulation with the individual policies and allocations of each authority's Local Plan, including elements of non-strategic needs and content regarding the rural economy.

6.1.6 Sustainability Objective 6: To value, conserve and enhance the natural environment, natural resources, biodiversity and geological diversity

Policy	Impact on SO6
SP1: Presumption in Favour of Sustainable Development	+
SP2: Spatial Strategy for North Essex	?
SP3: Meeting Housing Needs	0
SP4: Providing for Employment and Retail	N/A
SP5: Infrastructure and Connectivity	0
SP6: Place Shaping Principles	+
SP7: Development and Delivery of New Garden Communities in Essex	++
Cumulative Impact	+

The Strategic Section One can be seen to have positive connotations on this objective. Although the development of significant areas of Greenfield land could be expected to have negative implications, the policies of the Section One and the allocation of large strategic Garden Communities to meet growth needs can ensure effective enhancement to green infrastructure is forthcoming for net biodiversity gains. The Appropriate Assessment indicates that, providing that the North Essex Authorities continue to collaborate and prepare necessary Recreation Avoidance and Mitigation Strategies (RAMS), and in close consultation with Natural England, and the RAMS are ready for implementation prior to adoption of the Section 1 and Section 2 Local Plans, the Strategic Section 1 Local Plans is not predicted to result in adverse effects on the integrity of the Stour and Orwell Estuaries SPA/Ramsar, Hamford Water SPA/Ramsar, Essex Estuaries SAC, Colne Estuary SPA/Ramsar, or Blackwater Estuary SPA/Ramsar, either alone or in-combination with other plans and projects as a result of recreation. The AA adds that the strategic approach across the North Essex Authorities ensures that cumulative solutions to the possible recreational pressures on Natura 2000 sites can be mitigated successfully. It should be noted however that the findings of these RAMS will need to be adequately factored into any forthcoming masterplanning and Garden Community specific DPDs.

6.1.7 Sustainability Objective 7: To achieve more sustainable travel behaviour, reduce the need to travel and reduce congestion

Policy	Impact on SO7
SP1: Presumption in Favour of Sustainable Development	+
SP2: Spatial Strategy for North Essex	++
SP3: Meeting Housing Needs	N/A
SP4: Providing for Employment and Retail	N/A
SP5: Infrastructure and Connectivity	++
SP6: Place Shaping Principles	++
SP7: Development and Delivery of New Garden Communities in Essex	++
Cumulative Impact	++

The policies of the Strategic Section One for Local Plans can be expected to have significantly positive cumulative impacts on this objective. The infrastructure requirements of the Garden Communities, in adhering to sustainable transport Garden City Principles, can be expected to offer wider benefits and gain for neighbouring areas, and the geographical distribution of the preferred Garden Community options ensure that these benefits can be experienced across all three authorities with an inclusive coverage across North Essex.

6.1.8 Sustainability Objective 8: To promote accessibility, ensure that development is located sustainably and makes efficient use of land, and ensure the necessary infrastructure to support new development

Policy	Impact on SO7
SP1: Presumption in Favour of Sustainable Development	+
SP2: Spatial Strategy for North Essex	++
SP3: Meeting Housing Needs	N/A
SP4: Providing for Employment and Retail	N/A
SP5: Infrastructure and Connectivity	++
SP6: Place Shaping Principles	++
SP7: Development and Delivery of New Garden Communities in Essex	++
Cumulative Impact	++

The policies of the Strategic Section One for Local Plans can be expected to have significantly positive cumulative impacts on accessibility and infrastructure provision. The infrastructure requirements of the Garden Communities, in adhering to sustainable Garden City Principles can be expected to offer wider benefits and gain, particularly regarding accessibility associated with both transport and services for neighbouring areas, and the geographical distribution of the preferred Garden Community options. These ensure that these benefits can be experienced across all three authorities with an inclusive coverage across North Essex.

6.1.9 Sustainability Objective 9: To conserve and enhance historic and cultural heritage and assets and townscape character

Policy	Impact on SO9
SP1: Presumption in Favour of Sustainable Development	+
SP2: Spatial Strategy for North Essex	+
SP3: Meeting Housing Needs	N/A
SP4: Providing for Employment and Retail	N/A
SP5: Infrastructure and Connectivity	N/A
SP6: Place Shaping Principles	++
SP7: Development and Delivery of New Garden Communities in Essex	+
Cumulative Impact	+

Although more relevant to the selection of specific Garden Communities, there could be a perceived negative cumulative impact on the historic environment associated with strategic development at the scale proposed, particularly associated with field boundaries and patterns. Despite this, the policies have taken on board those recommendations of the Preferred Options SA and ensure that protection will occur in all instances with enhancement a significant possibility. Forthcoming masterplanning and Garden Community specific DPDs have the potential to enhance site specific assets and their settings and deliver a high quality built environment. Although a degree of uncertainty surrounds the status and content of the masterplans and DPDs and whether their content is appropriate to individual assets and designations, the general distribution of growth across the strategic area and the Section One policy content seeks to address any perceived or possible impacts on the historic environment.

6.1.10 Sustainability Objective 10: To make efficient use of energy and reduce contributions to climatic change through mitigation and adaptation.

Policy	Impact on SO10
SP1: Presumption in Favour of Sustainable Development	+
SP2: Spatial Strategy for North Essex	?
SP3: Meeting Housing Needs	N/A
SP4: Providing for Employment and Retail	N/A
SP5: Infrastructure and Connectivity	0
SP6: Place Shaping Principles	+
SP7: Development and Delivery of New Garden Communities in Essex	+
Cumulative Impact	0

There will be cumulative positive impacts regarding energy efficiency through the possibilities presented by strategic growth that adheres to Garden City Principles however these will be associated with these new developments only. Garden Communities have the potential to incorporate renewable energy generation, although it is uncertain at this stage whether such schemes will be sought. It should be acknowledged that requirements may form part of masterplans and the Garden Community specific DPDs. The cumulative impact is highlighted as a minor positive at this stage, in view of the policy content, what can currently be considered a feasible requirement, and in reflection of the early stages of each Garden Community's development through the planning system.

6.1.11 Sustainability Objective 11: To improve water quality and address water scarcity and sewerage capacity

Policy	Impact on SO11
SP1: Presumption in Favour of Sustainable Development	+
SP2: Spatial Strategy for North Essex	0
SP3: Meeting Housing Needs	0
SP4: Providing for Employment and Retail	N/A
SP5: Infrastructure and Connectivity	N/A
SP6: Place Shaping Principles	+
SP7: Development and Delivery of New Garden Communities in Essex	++
Cumulative Impact	?

Although the individual policies do not have negative impacts highlighted, these impacts respond more closely to water quality. It can reasonably be assumed that there could be likely cumulative negative implications regarding water scarcity and sewerage emanating from Section One relevant to the level of growth stated in Policy SP2, and the allocations for development in both Sections One and Two of the three authority's Local Plans. Despite this, the implications of this are best resolved on a site-by-site basis through early discussions with service providers on a plan-level and in certain areas as required. It should also be noted that all growth in the wider area can be expected to have such impacts; however in the specific context of Garden Communities, Policy SP7 seeks to ensure that such issues are not forthcoming from any successful planning application. Regarding water quality the AA states that, 'whilst there are currently issues regarding capacity of water recycling centres in both Colchester Borough and Tendring District, with subsequent risks to European sites associated with changes in water quality, the safeguards which will be included within the Section 2 Local Plans for each, will ensure that a given development will not proceed until the necessary infrastructure upgrades have been provided as necessary in accordance with Anglian Water and Environment Agency advice.' It adds that, 'the measures provided in the Section 2 Local Plans will also provide sufficient certainty that the overall strategic growth proposed in North Essex as part of the Section 1 for Local Plans will not result in significant adverse effects on the Stour and Orwell Estuaries SPA/Ramsar, Colne Estuary SPA/Ramsar, or Essex Estuaries SAC as a result of changes in water quality.' There are therefore no cumulative impacts associated with water quality emanating from Section One.

6.1.12 Sustainability Objective 12: To reduce the risk of fluvial, coastal and surface water flooding

Policy	Impact on SO12
SP1: Presumption in Favour of Sustainable Development	+
SP2: Spatial Strategy for North Essex	?
SP3: Meeting Housing Needs	N/A
SP4: Providing for Employment and Retail	N/A
SP5: Infrastructure and Connectivity	N/A
SP6: Place Shaping Principles	++
SP7: Development and Delivery of New Garden Communities in Essex	+
Cumulative Impact	0

There are no significant identified flood risk concerns resulting from the policies and Garden Communities of the Strategic Section One for Local Plans. Flood risk issues are considered more relevant to site specific considerations regarding alleviation. Policy content ensures that flood risk concerns will be considered in any forthcoming planning applications and it should be noted that the scale of the Garden Communities enables the integration of sustainable drainage techniques.

6.1.13 Sustainability Objective 13: To improve air quality

Policy	Impact on SO13
SP1: Presumption in Favour of Sustainable Development	+
SP2: Spatial Strategy for North Essex	+
SP3: Meeting Housing Needs	N/A
SP4: Providing for Employment and Retail	N/A
SP5: Infrastructure and Connectivity	N/A
SP6: Place Shaping Principles	+
SP7: Development and Delivery of New Garden Communities in Essex	+
Cumulative Impact	+

There are no identified cumulative implications of the specific content of the policies and preferred Garden Community options contained in the Strategic Part for Local Plans. The preferred Garden Community options, as per the Spatial Strategy, correspond to the best possible dispersal across the HMA to alleviate air quality issues in Colchester and associated with the A12 and A120. There are likely to be some general negative connotations on air quality associated with the level of growth required in North Essex however the distribution of growth and the policies of Section One seek to address this adequately.

6.1.14 Sustainability Objective 14: To conserve and enhance the quality of landscapes

Policy	Impact on SO14
SP1: Presumption in Favour of Sustainable Development	+
SP2: Spatial Strategy for North Essex	?
SP3: Meeting Housing Needs	?
SP4: Providing for Employment and Retail	N/A
SP5: Infrastructure and Connectivity	N/A
SP6: Place Shaping Principles	0
SP7: Development and Delivery of New Garden Communities in Essex	+
Cumulative Impact	?

Although more relevant to the specific Garden Communities, there can be expected to be uncertain cumulative impacts on landscapes from the above policies. Potential negative impacts are associated with the scale of development required on Greenfield land, however policy exists to ensure that development is sensitive to its surroundings in each instance and within the context of wider landscape character areas. It should be noted that this is a general issue relevant to any new development. It should also be noted that beyond the principles contained in Policies SP8-SP10 masterplanning and the Garden Community specific DPDs have further potential to mitigate and minimise site specific issues and deliver a high quality built environment.

6.1.15 Sustainability Objective 15: To safeguard and enhance the quality of soil and mineral deposits

Policy	Impact on SO15
SP1: Presumption in Favour of Sustainable Development	+
SP2: Spatial Strategy for North Essex	N/A
SP3: Meeting Housing Needs	N/A
SP4: Providing for Employment and Retail	N/A
SP5: Infrastructure and Connectivity	N/A
SP6: Place Shaping Principles	N/A
SP7: Development and Delivery of New Garden Communities in Essex	0
Cumulative Impact	0

There will be no cumulative impacts on safeguarding mineral deposits and the quality of soil associated with the policy content of the Strategic Section One for Local Plans.

6.2 Cumulative and Synergistic Impacts of Policies SP8-SP10

This section explores the cumulative and synergistic impacts of the Strategic Section One for Local Plan's policies SP8-SP10. There have been explored separately from Policies SP1-SP7 in so far as they have been assessed using a different framework and are focused more on how the relevant policies respond to specific principles and site considerations rather than general strategic themes. For the impacts of the specific Garden Communities, please refer to the relevant appraisals later in this report.

Table 20: Cumulative and Synergistic Impacts of Policies SP8-SP10

Objective	Corresponding Garden City Principle(s) and any additional considerations	SP8	SP9	SP10	Cumulative Impact
1. Physical Limitations	- Absence of insurmountable problems (ground conditions, flood risk, hazardous risks, pollution, contamination and air quality)	N/A	N/A	N/A	N/A
	- Incorporation of SuDS.	++	++	++	No impact
2. Impacts	- Reflect a fusion of the best of the past while embracing new materials and the needs of modern living	N/A	N/A	N/A	N/A
	- Acceptable impacts only on sites of nature conservation interest.	++	++	++	No impact
	- A surrounding belt of countryside to prevent sprawl, well connected and biodiversity rich public parks, and a mix of public and private networks of well-managed, high-quality gardens, tree-lined streets and open spaces.	++	++	++	No impact
	- Acceptable impacts only on high quality agricultural land, important landscape features.	+	+	+	No impact
3. Environment / Amenity	- Acceptable relationship only with and impact on occupiers of existing properties and neighbouring areas / towns (maintaining adequate separation)	++	++	++	N/A
4. Transport	- New Garden Cities should be located only where there are existing rapid public transport links to major cities, or where real plans are already in place for its provision.	++	++	++	Significant positive impact

Objective	Corresponding Garden City Principle(s) and any additional considerations	SP8	SP9	SP10	Cumulative Impact
	- Walking, cycling and public transport should be the most attractive and prioritised forms of transport in the garden city.	++	++	++	Positive impact
	- Ensure a comprehensive and safe network of footpaths and cycleways throughout the development, and public transport nodes within a short walking distance of all homes.	++	++	++	Positive impact
	- Where car travel is necessary, consideration should be made of shared transport approaches such as car clubs.	N/A	N/A	N/A	N/A
5. Resilience	- Positive contribution towards town centres.	++	++	++	Significant positive impact
	- Positive contribution towards identified regeneration priority areas and institutions	++	+	+	Positive impact
6. Housing	- Garden Cities (should be) part of a wider strategic approach to meeting the nation's housing needs.	++	++	++	Significant positive impact
	- An appropriate number homes in a new Garden City must be 'affordable' for ordinary people.	++	++	++	Significant positive impact
	- Provide mixed-tenure homes and housing types that are genuinely affordable for everyone	++	++	++	Significant positive impact
	- An appropriate percentage of the homes that are classified as 'affordable' must be for social rent.	?	?	?	Uncertain impact
	- Consider life-time homes and the needs of particular social groups, such as the elderly.	+	+	+	Significant positive impact
	- A range of housing types including self-build / custom build and gypsy and traveller pitches	++	++	++	Significant positive impact
	- Aspire to the very best domestic and commercial architecture with sensitivity to local vernacular design	N/A	N/A	N/A	N/A

Objective	Corresponding Garden City Principle(s) and any additional considerations	SP8	SP9	SP10	Cumulative Impact
	and materials.				
	- New Garden Cities should include opportunities for people to build their own home (either alone or collectively), and set aside land for future community needs.	++	++	++	Positive impact
7. Employment Opportunities	- New Garden Cities must provide a full range of employment opportunities, with the aim of no less than one job per new household.	++	++	++	Significant positive impact
	- There should be a robust range of employment opportunities in the Garden City itself, with a variety of jobs within easy commuting distance of homes.	++	++	++	Significant positive impact
8. Mixed-use Opportunities	- Inclusion of cultural, recreational and shopping facilities in walkable, vibrant, sociable neighbourhoods	++	++	++	No impact
9. Environmental Quality & Sustainability	- Create shared spaces for social interaction and space for both formal and informal artistic activities, as well as sport and leisure activities.	++	++	++	No impact
	- Strong emphasis should be placed on homes with gardens and on space for both allotments and community gardens and orchards to provide for healthy local food.	++	++	++	No impact
	- Garden Cities are places of cultural diversity and vibrancy with design contributing to sociable neighbourhoods. This means, for example, shaping design with the needs of children's play, teenage interests and the aspirations of elderly in mind.	++	++	++	No impact
	- Net gain to biodiversity is secured through master plans which link generous private and community gardens with wider public green and blue space and ultimately with strategic networks of green infrastructure and habitat creation.	++	++	++	Positive impacts

Objective	Corresponding Garden City Principle(s) and any additional considerations	SP8	SP9	SP10	Cumulative Impact
	- Garden Cities must demonstrate the highest standards of technological innovation in zero carbon and energy positive technology to reduce the impact of climate emissions.	++	++	++	Positive impacts
	- In building standards, a requirement for innovation beyond zero carbon and in the use of materials and construction techniques.	++	++	++	No impact
10. Developability / Deliverability	- Ensure that the development can self-fund infrastructure costs	++	++	++	No impact
	- Be commercially attractive with strong market conditions and value potential	++	++	++	No impact
	- Availability of land being put forward for development with active landowner/developer interest	++	++	++	No impact
	- Scope for delivery structures through active and positive public and private sector engagement	++	++	++	No impact

The benefits associated with the policy requirements of SP8-SP10 extend to wider areas beyond the Garden Communities themselves. For that reason, significant positive impacts are likely for those Garden City principles that combine to offer wider benefits and impacts beyond those identified for each Garden Community policy individually.

Largely significantly positive impacts regard the specific policy principles that combine to offer social and economic benefits, such as housing, employment and improving public transport networks in North Essex. There will also be positive impacts associated with improving the resilience of the town centres of Colchester and Braintree. There will also be some minor positive impacts on improving green and blue infrastructure in the strategic area.

An uncertain cumulative impact is highlighted for the principle that there are an appropriate percentage of homes classified as 'affordable' that are for social rent, where the policies do not explicitly state that this is a requirement. This is not to say that such provision would not be forthcoming however.

In addition, cumulative impacts can be expected to be significant in accumulation with the 'Section Two' of each of the authorities' Local Plans, which will look to build on this long term strategic growth with short and medium term solutions on a non-strategic level.

7. Conclusions and Recommendations

7.1 Key Points from the Assessment of Policies SP1-SP10

7.1.1 Key Points from the Assessment of Policies SP1-SP7

The following table sets out the combined long term sustainability impacts assessed in the individual appraisal of each policy as well as that of the Vision and the Strategic Objectives of the Strategic Section One for Local Plans.

Table 21: Summary of Long Term Impacts of Policies SP1-SP7

Policy	Sustainability Objectives (SO)														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Vision	N/A	++	++	N/A	++	++	++	N/A	++	N/A	N/A	N/A	N/A	N/A	N/A
Objs	+	++	++	+	++	N/A	++	++	+	+	N/A	N/A	N/A	N/A	N/A
SP1	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
SP2	+	++	++	++	++	?	++	++	+	?	0	?	+	?	N/A
SP3	N/A	++	N/A	N/A	N/A	0	N/A	N/A	N/A	N/A	0	N/A	N/A	?	N/A
SP4	N/A	N/A	N/A	++	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SP5	N/A	N/A	++	++	++	0	++	++	N/A	0	N/A	N/A	N/A	N/A	N/A
SP6	++	N/A	+	+	N/A	+	++	++	++	+	+	++	+	0	N/A
SP7	++	++	++	++	++	++	++	++	+	+	++	+	+	+	0

The following key points can be made regarding the appraisal of the plan's non-site related policies:

- The strategic vision for the area will have positive impacts on housing and employment related Sustainability Objectives. The significance of these impacts will increase in the long term with the principle of sustainable Garden Communities being developed as part of a sustainable strategy for growth and in response to objectively assessed housing and employment needs, and also their wider benefits. This will also be the case for health, the natural environment, and the historic environment through the provision of green infrastructure, new and expanded education and health care facilities and recreational land and also the protection and enhancement of countryside and heritage assets. There will additionally be significant long term impacts on

ensuring the necessary transport infrastructure to support new development in line with the benefits expected of the Garden Communities as they emerge in the latter stages of the three authorities' Local Plan periods.

- Employment forecasts have an underlying principle: that planning for housing, economic land uses and community facilities / services should be integrated, so that the demand for labour is fulfilled and there are no unsustainable levels of out-commuting. The principle of these links to identifying future job growth to housing provision is a key tenet of sustainability and as such, there will be further significant positive impacts associated with employment and housing arising from the Section One Plan.
- The Spatial Strategy will ensure a large number of significant positive impacts, most notably regarding housing delivery, economic growth, public transport improvements and accessibility. The short and medium term impacts of these are related to the notion that development will be accommodated within or adjoining settlements according to their scale and existing role both within each individual district; these correspond to the NPPF requirements of each LPA in the formulation of a Local Plan and offers a local distinctiveness to the strategic area relevant to local needs and communities. Long term impacts will become more significant in line with the emergence of the Garden Communities.
- Further long term significant positive impacts associated with Garden Communities can be expected to be realised on health, through the integration and requirement of suitable facilities and open space and recreation requirements; sustainable travel through the requirements of sustainable transportation means to be provided, and education and skills through the provision of primary, secondary and early years facilities as per Garden City Principles and Essex County Council infrastructure requirements.
- Minor positive impacts can be expected through Garden Community developments associated with townscapes through a combined alleviation of pressures on existing settlements at the expected scale and also in conjunction with design expectations and opportunities. This focus away from the expansion of existing settlements will also help to alleviate air quality pressures in settlements.
- Uncertain impacts can be expected to arise from the principle of Garden Communities regarding landscapes through the development of green field land, however it should be acknowledged that at the specified scale, and commensurate with the density requirements of Garden City Principles, Garden Communities are capable of mitigating such concerns effectively and creating high quality new environments.
- Further uncertainty surrounds those impacts of integrating renewable energy technologies explicitly in policy.
- Regarding water quality, the AA states that, 'whilst there are currently issues regarding capacity of water recycling centres in both Colchester Borough and Tendring District, with subsequent risks to European sites associated with changes in water quality, the safeguards which will be included within the Section 2 Local Plans for each, will ensure that a given development will not proceed until the necessary infrastructure upgrades have been provided as necessary in accordance with Anglian Water and Environment Agency advice. Therefore, in conclusion, the measures provided in the Section 2 Local Plans will also provide sufficient certainty that the

overall strategic growth proposed in North Essex as part of the Section 1 for Local Plans will not result in significant adverse effects on the Stour and Orwell Estuaries SPA/Ramsar, Colne Estuary SPA/Ramsar, or Essex Estuaries SAC as a result of changes in water quality.' There are therefore no significant impacts on water quality resulting from Section One and the level of growth.

- There will be 'no impact' on Natura 2000 sites as a result of the findings of the Appropriate Assessment (AA) (2017) of the Section One, regarding recreational pressures associated with the significant increase in growth stated within the Policy. The AA concludes that 'providing that the North Essex Authorities continue to collaborate and prepare the necessary Recreation Avoidance and Mitigation Strategies (RAMS) ... in close consultation with Natural England, and the RAMS are ready for implementation prior to adoption of the Section 1 and Section 2 Local Plans, the Strategic Section 1 Local Plans is not predicted to result in adverse effects on the integrity of the Stour and Orwell Estuaries SPA/Ramsar, Hamford Water SPA/Ramsar, Essex Estuaries SAC, Colne Estuary SPA/Ramsar, or Blackwater Estuary SPA/Ramsar, either alone or in-combination with other plans and projects as a result of recreation.' In addition, the AA indicates that the strategic approach and scope of the Section One enables mitigation to be effectively incorporated.
- The Section One policies can be seen to ensure biodiversity benefits in regard to the integration of green and blue infrastructure throughout the strategic area.

7.1.2 Key Points from the Assessment of Policies SP8-SP10

The following key points can be made from the appraisal of Policies SP8-SP10:

- There will be significant positive impacts associated with the majority of the Garden City principles, in consideration of the policy and the appraisal of the preferred Garden Community option at the Tendring / Colchester Borders. It should be noted that impacts are only relevant in the long term, associated with Garden Communities coming forward in the latter stages of the Plan period. This includes the impact on the regeneration areas within Colchester town centre and to the east of the town, due largely to the Policy content; in particular those related to sustainable transport, in conjunction with the general location of the option.
- There will be largely significantly positive impacts regarding the specific policy principles that combine to offer social and economic benefits, such as housing, employment and improving public transport networks in North Essex. There will also be positive impacts associated with improving the resilience of the town centres of Colchester and Braintree and also green and blue infrastructure in the wider Strategic Area.
- An example where the policies will not ensure significant positive impacts against the Garden City Principles however relates to the aspiration that an appropriate percentage of homes that are classified as 'affordable' be specifically for social rent. It is recommended that such a requirement is included within the policies. In addition, the policies are not explicit in a need to consider life-time homes, however do imply provision, including requirements for a mix of housing types and tenures.
- There can be expected to be minor negative impacts on agricultural land and landscapes due to the loss of agricultural land associated with Greenfield development. Regarding landscape

however, the policies will ensure that development is of a high standard of design and layout drawing on their context and abilities in this regard. The development of Garden Communities in the locations specified, and with the specific policy principles regarding landscape, can be seen to ensure that the best possible development outcomes are achieved in their broad areas.

7.2 The Sustainability of Section One as a Whole

The overall impacts of Section One can be seen in the following table. The table effectively represents the cumulative impacts of Section One's policies SP1-SP10. Commentary is given for each sustainability objective.

Table 22: Overall Impacts of Section One

SA Objective	Overall Impact
1. Create safe environments which improve quality of life, community cohesion	Positive impacts

The Strategic Section One for Local Plans can be seen to have positive impacts on this objective where relevant, predominantly through general place shaping principles and the policy criteria relevant specific to the Garden Communities. Although impacts are minor at this stage, impacts can be seen to be strengthened through the Local Plan Section Twos of the three authorities, with the inclusion of design orientated development management policies that will also apply.

SA Objective	Overall Impact
2. To ensure that everyone has the opportunity to live in a decent, safe home which meets their needs at a price they can afford	Significant positive impacts

There will be significant positive effects in ensuring good quality and inclusive homes. Section One also ensures that objectively assessed housing needs are met throughout Local Plan periods within North Essex, particularly in accordance with each LPA's individual requirements. The Spatial Strategy directs growth to existing sustainable settlements in the first instance, and the Garden Communities ensure that growth needs are met not only in the latter stages of the plan periods, but also make a significant contribution to meeting future needs beyond plan periods. The Strategic Section One for Local Plans, in exploring options and solutions for meeting unmet elements of objectively assessed need over the strategic area will also ensure significant positive cumulative impacts on this objective in accumulation with the individual Spatial Strategies of each authority's Local Plan, including elements of non-strategic needs, and as per the LPA level requirements of the OAN Report. Regarding Policies SP8-10, largely significantly positive impacts regard the specific policy principles that combine to offer social and economic benefits, such as housing, employment and improving public transport networks in North Essex.

SA Objective	Overall Impact
3. Improve health/reduce health inequalities	Significant positive impacts

There will be significantly positive health impacts associated with the cumulative effects of the Strategic Section One for Local Plans' policies and commitment to delivering Garden Communities as well as the Garden Community policies (SP8-10) themselves. This is largely due to a combination of health related infrastructure provision and also adherence to Garden City Principles regarding walking and cycling infrastructure and the provision of open space and recreational facilities. There will also be positive impacts in this regard associated with the content of each authority's Local Plan policies and designation of non-strategic open space and recreation.

SA Objective	Overall Impact
4. To ensure and improve the vitality & viability of centres	Significant positive impacts

There will be significant cumulative impacts on the town centres of Colchester and Braintree in line with the various policies within Section One. The Spatial Strategy will seek to locate development within such centres in the short-medium term, with long term benefits being experienced in the long term through better infrastructure and connectivity associated with the Garden Communities, particularly regarding public transport networks. There will also be significant positive impacts associated with the individual Section Twos of the Local Plans of Colchester and Braintree. The locations of the Garden Communities are likely to support the town centres of Colchester and Braintree, the two largest centres within the strategic area. Section One is unlikely to support the town centres of Clacton and Harwich within Tendring District, and Witham within Braintree District, however it should be noted that a large amount of non-strategic (within the context of the Section One) development is allocated in such centres within the Tendring District Council and Braintree District Council Local Plan Section Twos.

SA Objective	Overall Impact
5. To achieve a prosperous and sustainable economy that creates new jobs, improves the vitality and viability of centres and captures the economic benefits of international gateways	Significant positive impacts

There can be expected to be significant positive impacts regarding the requirements to ensure job creation through ensuring that employment requirements can be met throughout Local Plan periods within North Essex, particularly in the latter stages and in accordance with each LPA's individual requirements. The preferred strategic Spatial Strategy also conforms to as broad a geographical dispersal as possible across North Essex in light of available land and promoted sites. The Strategic Section One for Local Plans will also ensure significant positive cumulative impacts on this objective in accumulation with the individual policies and allocations of each authority's Local Plan, including elements of non-strategic needs and content regarding the rural economy. The Garden Communities are located within locations in which

existing strategic employment areas are accessible, with further positive impacts associated with specific employment provision at each Garden Community and with infrastructure commitments of an enhanced public transport offer to key centres.

SA Objective	Overall Impact
6. To value, conserve and enhance the natural environment, natural resources, biodiversity and geological diversity	Positive impacts

The Strategic Section One can be seen to have positive connotations on this objective. Although the level of growth established within Section One, and the allocation of Garden Communities, will lead to the development of significant areas of Greenfield land which could be expected to have negative implications, Section One can ensure effective enhancement to green and blue infrastructure for net biodiversity gains. The Appropriate Assessment indicates that, providing that the North Essex Authorities continue to collaborate and prepare necessary Recreation Avoidance and Mitigation Strategies (RAMS), and in close consultation with Natural England, and the RAMS are ready for implementation prior to adoption of the Section 1 and Section 2 Local Plans, the Strategic Section 1 Local Plans is not predicted to result in adverse effects on the integrity of the Stour and Orwell Estuaries SPA/Ramsar, Hamford Water SPA/Ramsar, Essex Estuaries SAC, Colne Estuary SPA/Ramsar, or Blackwater Estuary SPA/Ramsar, either alone or in combination with other plans and projects as a result of recreation. The AA adds that the strategic approach across the North Essex Authorities ensures that cumulative solutions to the possible recreational pressures on Natura 2000 sites can be mitigated successfully. It should be noted however that the findings of these RAMS will need to be adequately factored into any forthcoming masterplanning and Garden Community specific DPDs.

SA Objective	Overall Impact
7. To achieve more sustainable travel behaviour, reduce the need to travel and reduce congestion	Significant positive impacts

The policies of the Section One for Local Plans can be expected to have significantly positive impacts on this objective. The infrastructure requirements of the Garden Communities, in adhering to sustainable transport Garden City Principles, can be expected to offer wider benefits and gain for neighbouring areas, and the geographical distribution of the preferred Garden Community options ensure that these benefits can be experienced across all three authorities with an inclusive coverage across North Essex. The content of the Local Plan Section Twos ensure that suitable public transport and access solutions are forthcoming to support the Spatial Strategy's notion of focusing growth to existing settlements within the short-medium term of the plan period.

SA Objective	Overall Impact
8. To promote accessibility, ensure that development is located sustainably and makes efficient use of land, and ensure the necessary infrastructure to support new development	Significant positive impacts

The policies of the Strategic Section One for Local Plans can be expected to have significantly positive cumulative impacts on accessibility and infrastructure provision. The infrastructure requirements of the Garden Communities, in adhering to sustainable Garden City Principles can be expected to offer wider benefits and gain, particularly regarding accessibility associated with both transport and services for neighbouring areas, and the geographical distribution of the preferred Garden Community options. This ensures that these benefits can be experienced across all three authorities with an inclusive coverage across North Essex. The Garden Communities are of a sufficient size to stimulate educational infrastructure provision. It should also be noted that the interventionist approach of the North Essex Authorities ensures that both infrastructure provision is self-funded through each Garden Community, and that the approach to their development is one of 'infrastructure first'. In addition, the content of the Local Plan Section Twos ensure that suitable supporting infrastructure, including public transport and access solutions are forthcoming to support the Spatial Strategy's notion of focusing growth to existing settlements within the short-medium term of the plan period.

SA Objective	Overall Impact
9. To conserve and enhance historic and cultural heritage and assets and townscape character?	Positive impacts

Within the context of Section One, this objective is largely relevant to the specific Garden Community policies (SP8-10). There could be a perceived negative cumulative impact on the historic environment associated with strategic development at the scale proposed, but despite this, the policies have taken on board those recommendations of the Preferred Options SA and ensure that protection will occur in all instances with enhancement a significant possibility. Forthcoming masterplanning and Garden Community specific DPDs have the potential to enhance site specific assets and their settings and deliver a high quality built environment. Although a degree of uncertainty surrounds the status and content of the masterplans and DPDs and whether their content is appropriate to individual assets and designations, the general distribution of growth across the strategic area and the Section One policy content seeks to address any perceived or possible impacts on the historic environment. It should additionally be noted here however, that such issues are better addressed within the Local Plan Section Twos, with the inclusion of relevant thematic development management policies.

SA Objective	Overall Impact
10. To make efficient use of energy and reduce contributions to climatic change through mitigation and adaptation.	0

There will be positive impacts regarding energy efficiency as a result of the Section One policies, particularly through the requirements of the Garden Community policies SP8-10. Despite this, Garden Communities have the potential to incorporate renewable energy generation, although it is uncertain at this stage whether such schemes will be sought. It should be acknowledged that requirements may form part of masterplans and the Garden Community specific DPDs. The impact is highlighted as a minor positive at this stage, in view of the policy content, what can currently be considered a feasible requirement, and in reflection of the early stages of each Garden Community's development through the planning system. It should also be noted that policies exist in the respective authorities; Local Plan Section Twos, with the inclusion of relevant thematic development management policies.

SA Objective	Overall Impact
11. To improve water quality and address water scarcity and sewerage capacity	Uncertain Impacts

It can reasonably be assumed that there could be likely negative implications regarding water scarcity and sewerage emanating from Section One relevant to the level of growth stated in Policy SP2, the Garden Community allocations, and the allocations for development in the Local Plan Section Twos. Despite this, the implications of this are best resolved on a site-by-site basis through early discussions with service providers on a plan-level and in certain areas as required. It should also be noted that all growth in the wider area can be expected to have such impacts; however in the specific context of Garden Communities, Policy SP7 seeks to ensure that such issues are not forthcoming from any successful planning application.

Regarding water quality the AA states that, 'whilst there are currently issues regarding capacity of water recycling centres in both Colchester Borough and Tendring District, with subsequent risks to European sites associated with changes in water quality, the safeguards which will be included within the Section 2 Local Plans for each, will ensure that a given development will not proceed until the necessary infrastructure upgrades have been provided as necessary in accordance with Anglian Water and Environment Agency advice.' It adds that, 'the measures provided in the Section 2 Local Plans will also provide sufficient certainty that the overall strategic growth proposed in North Essex as part of the Section 1 for Local Plans will not result in significant adverse effects on the Stour and Orwell Estuaries SPA/Ramsar, Colne Estuary SPA/Ramsar, or Essex Estuaries SAC as a result of changes in water quality.' There are therefore no impacts associated with water quality emanating from Section One.

SA Objective	Overall Impact
12. To reduce the risk of fluvial, coastal and surface water flooding	0

There are no significant identified flood risk concerns resulting from the policies and Garden Communities of Section One. A number of the Garden Community allocations contain small areas of Flood Risk Zones 2 and 3, however these are not significant in response to the scale of the schemes and can be successfully integrated into any open space or green infrastructure requirements. The policy content ensures that flood risk concerns will be considered in any forthcoming planning applications and it should be noted that the scale of the Garden Communities enables the integration of sustainable drainage techniques.

SA Objective	Overall Impact
13. To improve air quality	Positive impacts

There are no identified implications regarding air quality of the specific content of the policies and preferred Garden Community options contained in the Strategic Part for Local Plans. The Garden Community allocations, as per the Spatial Strategy, correspond to the best possible dispersal across the HMA to alleviate air quality issues in Colchester and associated with the A12 and A120. The stance of allocating Garden Communities as opposed to urban extensions seeks partly to ensure that new growth does not impact on AQMAs, such as those found in Colchester town. It can be expected that there could be some general negative connotations on air quality associated with the level of growth required in North Essex, however the distribution of growth and the policies of Section One seek to address this adequately.

SA Objective	Overall Impact
14. To conserve and enhance the quality of landscapes	Uncertain Impacts

There can be expected to be uncertain impacts on landscapes resulting from Section One. These impacts are relevant to the specific Garden Community allocations themselves. Potential negative impacts are associated with the scale of development required on Greenfield land, however policy exists to ensure that development is sensitive to its surroundings in each instance and within the context of wider landscape character areas. It should be noted that this is a general issue relevant to any new development. It should also be noted that beyond the principles contained in Policies SP8-SP10 masterplanning and the Garden Community specific DPDs have further potential to mitigate and minimise site specific issues and delivery a high quality built environment. Landscape related Section Two policies will also have to be adhered to in any successful application.

SA Objective	Overall Impact
15. To safeguard and enhance the quality of soil and mineral deposits?	Uncertain Impacts

There will be minimal impacts on safeguarding mineral deposits and the quality of soil associated with the policy content of Section One. The Garden Community allocation at West of Braintree contains a site allocated within the ECC Minerals Local Plan for mineral extraction. Although not considered an insurmountable problem, the implications of this are that the North Essex Authorities will have to work with the Minerals and Waste Planning Authority and the landowner / developer of this minerals site to seek compromises surrounding the restoration of the site for a use compatible with Garden City principles at the masterplanning stage and within the Garden Community specific DPD for West of Braintree. Uncertain overall impacts are therefore identified for Section one.

7.3 Key Points from the Assessment of the Garden Community (GC) Options (in Appendix 1)

The following table sets out the assessed sustainability impacts of all reasonable Garden Community options explored. For clarity, the full reference for each option is reiterated:

Option	Sub-Option	Reference number for purposes of assessment
Tending / Colchester Borders	Option 1: Southern Land Focus	GCEC1
	Option 2: A133 to Colchester - Ipswich rail line	GCEC2
	Option 3: North to South wrap	GCEC3
North Colchester	Option 1: East of Langham Lane focus	GCNC1
	Option 2: Maximum Land Take	GCNC2
Colchester / Braintree Borders	Option 1: North and South of A12 / Rail Corridor Focus	GCWC1
	Option 2: South of A120 and North of Marks Tey Existing Settlement	GCWC2
	Option 3: South of A120 Focus	GCWC3
	Option 4: Maximum Land Take	GCWC4
West of Braintree	Option 1: Braintree DC only	GCWB1
	Option 2: Braintree DC and Uttlesford DC Land	GCWB2
CAUSE 'Colchester Metro Plan'	N/A - Option 1: Metro Plan submission	GCMP1
Monks Wood	N/A - Option 1: Proposal as submitted	GCMW1

Table 23: Summary of Impacts of the Reasonable Garden Community (GC) Options

GC Option	Sustainability Objectives (SO)									
	1	2	3	4	5	6	7	8	9	10
GCEC1	?	?	+	+	++	++	++	++	++	++
GCEC2	?	?	+	+	++	++	++	++	++	+
GCEC3	?	?/-	?/+	+	++	++	++	++	++	+
GCNC1	?/-	-	?/-	?/-	+	++	+	++	++	+
GCNC2	?/-	-	?/-	?/-	+	++	+	++	++	?
GCWC1	?	?	?/-	?	?/+	++	+	++	++	?
GCWC2	?	?/-	?/-	?	?/+	++	+	++	++	?
GCWC3	?	?	?/-	?	?/+	++	+	++	++	?
GCWC4	?	-	?/-	?/-	?	++	+	++	++	?
GCWB1	?/-	?/-	?/-	?/-	?/+	++	?/+	++	++	?
GCWB2	?/-	?/-	?/-	?/-	?/+	++	?/+	++	++	?
GCMP1	-	--	--	+	++	--	?	?	-	--
GCMW1	?	?/-	?/-	-	?/-	++	+	++	++	?

Overview of Impacts Resulting from the Garden Community Options

As can be seen, the most significantly positive impacts are associated with the Tendring / Colchester Borders Garden Community options, followed by the smaller West Braintree Garden Community sub-option. Those sub-options of the Colchester / Braintree Garden Community that do not seek maximum land-take will also offer largely positive outcomes, although there are additionally many uncertain impacts (i.e. ones that could either be positive or negative at this stage) at this stage and in the absence of confirmed master plans and solutions contained within a Garden Community specific DPD.

Negative impacts can be seen to be most significant through the Metro Plan option of delivering growth requirements. These impacts are largely due to the model not being able to meet Garden City principles, and no single development being of a scale of land that can reasonably be expected to mitigate any negative impacts on-site and within the identified areas.

The North Colchester option will have negative impacts associated with physical limitations on site, regarding landscape implications of being located in close proximity to an Area of Outstanding Beauty (AONB) and also the impacts associated with being an adjacent community to Colchester to the south. The options also

do not benefit from any existing rail links, with effective public transport solutions limited as a result, however the broad location could be considered broadly sustainable aside from these limitations.

The Monks Wood proposal has issues regarding impacts on neighbouring settlements, a lack of rail links and access to the strategic road network. Pertinently, these latter two considerations will likely have significant negative connotations on the neighbouring settlement of Kelvedon, where the closest rail stations exist and where effective rapid bus transit solutions would be unsuitable for integration purposes.

7.4 Key Points from the Cumulative Assessment of the Allocated Garden Communities

7.4.1 Summary of Cumulative Impacts Resulting from the Allocated Garden Communities

The emerging masterplans for the allocated Garden Communities of Tendring / Colchester Borders, Colchester / Braintree Borders and West of Braintree most closely represent:

- Tendring / Colchester Borders – GCEC3
- Colchester / Braintree Borders – GCWC1
- West of Braintree – GCWB1

The following cumulative conclusions can be made of the appraisal of the allocated Garden Community options:

Water

- The AA states that, 'whilst there are currently issues regarding capacity of water recycling centres in both Colchester Borough and Tendring District, with subsequent risks to European sites associated with changes in water quality, the safeguards which will be included within the Section 2 Local Plans for each, will ensure that a given development will not proceed until the necessary infrastructure upgrades have been provided as necessary in accordance with Anglian Water and Environment Agency advice. Therefore, in conclusion, the measures provided in the Section 2 Local Plans will also provide sufficient certainty that the overall strategic growth proposed in North Essex as part of the Section 1 for Local Plans will not result in significant adverse effects on the Stour and Orwell Estuaries SPA/Ramsar, Colne Estuary SPA/Ramsar, or Essex Estuaries SAC as a result of changes in water quality.'

Accessibility

- It is not considered that there are any cumulative accessibility issues surrounding the preferred sites, due to their general geographic distribution.

Air Quality

- There may be some cumulative road traffic and associated air quality issues from any of the Garden Communities with any non-strategic site allocations in the Councils' respective Section Twos that are in close-proximity. This should be a focus of the Local Plans' Section Twos.

The Historic Environment

- Cumulative impacts are limited regarding historic environmental features due to the geographic dispersal of the Garden Communities.

Landscape

- Cumulative impacts are limited regarding landscape due to the geographic dispersal of the Garden Communities.

Biodiversity

- The AA identifies the need for a Recreation Avoidance and Mitigation Strategy (RAMS) to be developed and the findings factored into any policies, forthcoming masterplans or Garden Community specific DPDs should increases in the level of recreational land be required at any of the Garden Community allocations.

Neighbouring Properties / Coalescence with Existing Settlements

- There will be no cumulative impacts associated with the effects on occupiers of existing properties and neighbouring areas/towns resulting from the Garden Communities due to their geographic distribution. Garden City principles would have to be adhered to in regard to a surrounding belt of countryside to avoid sprawl, and this minimises any perceived coalescence and resulting impact on existing settlements.
- Cumulatively, no one existing settlement would be negatively affected by any combination of Garden Communities. More holistically, similarly can no single Landscape Character Area be affected by a combination of Garden Communities, of which existing historic settlements form an important part of integrity and sensitivity.
- Benefits will be realised for existing nearby communities regarding an increase in services and local infrastructure in the wider areas beyond the Garden Communities.

Public Transport

- There will be significant positive cumulative impacts resulting from the allocated Garden Communities in response to their individual potential to significantly improve public transport links within the North Essex Authorities area. Positive impacts can also be expected to benefit wider local areas in proximity to the Garden Communities.

Health

- The notion of Garden Communities will have positive synergistic impacts regarding health outcomes, with the level of growth required in the North Essex Authorities being provided through developments that require walking, cycling and public transport designed to be the most attractive forms of local transport.

Town Centres

- There will be significant positive cumulative impacts resulting from the allocated Garden Communities in response to their individual potential to significantly support and improve the

viability of the town centres of Colchester and Braintree within the North Essex Authorities area. Positive impacts can also be expected to benefit wider local areas in proximity to the Garden Communities, with enhanced public transport opportunities to such centres in the locality.

Housing

- All of the Garden Communities can be expected to have significantly positive impacts on housing growth. Cumulatively, these impacts become more positive over the plan period and beyond, with the ability to successfully integrate all housing types and tenures, including gypsy and traveller provision.

Employment

- All of the Garden Communities can be expected to have positive impacts on employment growth. Cumulatively, these impacts can become more positive over the plan period and beyond, with the ability to successfully integrate a wide range of local jobs within easy commuting distance from homes.
- Access and public transport requirements of Garden Communities may in practice result in out-commuting beyond each Garden Community and local centres within the North Essex Authorities area. This should not be considered a criticism of the Garden Communities, being more reflective of travel to work flows and commuting patterns within the North Essex Authorities area.

Mixed-use Developments

- All of the Garden Communities can be expected to have a strong prospect of providing the full suite of required mixed-use opportunities, including the provision of both primary and secondary schools. This will have significant cumulative benefits across the North Essex Authorities area and wider benefits for existing communities in the broad areas for each Garden Community.

Open Space and Sustainable Drainage Systems

- All of the Garden Communities can be expected to have a strong prospect of providing the full suite of open space, allotments/food production areas, biodiversity gains and SuDS. This will ensure cumulative benefits across the North Essex Authorities area and wider benefits for existing communities in the broad areas for each Garden Community.
- There are likely to be additional cumulative benefits associated with wider health outcomes outside the direct scope of the Garden City principles.
- In addition, the location and scale of any forthcoming recreational land that may be required could result in harmful impacts financially on existing Country Parks within the ECC Country Park model through increased competition.

Soil

- Cumulative impacts are limited regarding the loss of high quality soils due to the geographic dispersal of the Garden Communities and quality of soils at each individual location.

Climatic Factors

- Whereas negative impacts can be expected regarding carbon emissions, this is more relevant to

the level of growth. In this context, the Garden Communities can be expected to offer some small cumulative benefits in so far as energy efficiency can be ensured throughout development in accordance with Garden City principles and the wider policy framework within Section One to which any forthcoming planning applications would have to adhere.

7.5 Recommendations, including those taken on board throughout the SA process

7.5.1 The Section One Policies

The following recommendations have been made throughout the appraisal of the Strategic Section One for Local Plans:

- At the Preferred Options stage, the SA recommended that **Policy SP6** could be more explicit as to the requirements of new development in regards to the historic environment and assets and also scope for the policy to regard surface water flood risk. Both of these recommendations have been factored into the Policy. The Preferred Options SA also recommended that the Policy could respond to aspirations to increase renewable energy generation in strategic scale development opportunities. This recommendation is still valid at this stage, and reiterated within this SA; however it should be acknowledged that such integration is not considered to affect the principle of any development coming forward compliant with Policy SP6, and that the requirement at this stage could be considered premature in light of the emerging Garden Community masterplans and what is viable and achievable. A final recommendation regarding Policy SP6 is that as written there may be some level of conflict between the principle that seeks green and blue infrastructure to be integrated with multi-functional public open space requirements. The incorporation of these should be considered separate requirements, as biodiversity features are unlikely to flourish through human disturbance.
- At the preferred options stage, the SA highlighted that for **Policy SP7**, heritage assets exist across all of the Garden Community areas (and additionally potential archaeological deposits that would need to be excavated). At that stage a recommendation was made that Policy SP7 could include a principle that masterplans seek ways to achieve quality and active management of heritage assets and the historic environment as part of a positive strategy for their conservation and enjoyment. This recommendation has since been incorporated into the Policy.
- It can be considered that the majority of the Garden Community options will have some degree of impact on agricultural land, landscape, sites of nature conservation and the historic environment / heritage assets. It should be acknowledged that such issues are not insurmountable at the scales of development proposed in the options and that effective masterplanning and Garden Community specific DPDs can seek to protect and enhance conditions further.
- At the preferred Options stage, the SA recommended that for **Policy SP9** requirements ensuring the protection and/or enhancement of Marks Tey Brickpit SSSI were included within the Policy, as identified by the fact that the broad location is in the SSSI's Impact Risk Zone (IRZ) for the designation. This recommendation has been effectively factored into the policy.

- At the Preferred Options stage, the SA recommended that for **Policy SP10** requirements ensuring the protection and/or enhancement of the heritage asset of the Saling Hall conservation area and areas of deciduous woodland within and adjoining the site could additionally be included to factor in the Registered Park and Garden of Saling Grove. This recommendation has been effectively factored into the policy.
- It is recommended that a Recreation Avoidance and Mitigation Strategy (RAMS) is developed and the findings factored into any policies, forthcoming masterplans or Garden Community specific DPDs should increases in the level of recreational land be required at any of the Garden Community allocations.

7.5.2 The Allocated Garden Communities

The Garden Communities are being carefully developed through effective masterplanning, in order to positively adhere to issues surrounding physical limitations, in particular access arrangements to sites, infrastructure requirements and strategies regarding permeability and interconnectivity within the new settlements.

The following recommendations are made regarding the selection of Garden Community options within the three broad locations of the allocated Garden Communities.

Tendring / Colchester Borders

- The SA indicates that option GCEC1 is the most sustainable option, due to its smaller scale and therefore comparatively minimal impacts. Despite this, it is possible that mitigation might be required in the form of habitat creation and management at the Garden Community due to possible impacts on wintering birds, as identified within the AA. With this in mind, it may be more appropriate for a larger option to be considered in order to address this possible requirement. Option GCE3 will require some level of mitigation in regard to the presence of Bullock Wood SSSI, and it is recommended that this localised area be protected in future masterplans. It is recommended that severance issues surrounding the A137 are also addressed in masterplans and transport interconnectivity.

Colchester / Braintree Borders

- Options GCWC1 and GCWC3 represent, broadly, the most sustainable options within the Colchester / Braintree Borders area. Option GCWC1 contains the Marks Tey Brickpit SSSI, however its location at the north east boundary in each instance ensures that this designation can be protected and enhanced through the requirements of a surrounding belt of countryside to prevent sprawl and this is recommended. Issues surrounding the Domsey Brook should also be factored into any development of GCWC3 as blue infrastructure. Options GCWC2 and GCWC4 are in close proximity to a Scheduled Monument (a Roman villa 450m south of Warren's Farm to the north) and could affect the setting of this asset, and enhancement of this asset should be sought within the wider detailed masterplan. Impacts on the residential amenity of the settlements of Marks Tey and Little Tey are issues surrounding the options GCWC1, GCWC2 and GCWC4. A buffer separation will likely be needed to be developed through masterplanning to minimise certain impacts on existing communities and these should be subject to community engagement.

West of Braintree

- The smaller option GCWB1 is considered the most sustainable option in West of Braintree due to an increased likelihood of negative impacts associated with nature conservation and heritage assets to the western boundary of option GCWB2. Both options will need to address the presence of heritage assets throughout the area, particularly in the north associated with the Conservation Area of Great Saling which contains a range of listed buildings including grade II as well as the Registered Park and Garden of Saling Grove, and seek enhancements at the masterplanning stage. It is also recommended that a buffer separation will likely be needed to be developed through masterplanning to minimise certain impacts on existing communities, specifically in relation to residents in Stebbing Green and Blake End. The masterplans should be subject to community engagement.

8. Next Steps & Monitoring

8.1 Consultation

This Environmental Report will be subject to consultation alongside the Local Plans of the three Local Planning Authorities. There are three statutory consultees or 'environmental authorities' that are required to be consulted for all Sustainability Appraisal and Strategic Environmental Assessment documents. These are:

- The Environment Agency;
- Natural England; and
- Historic England.

In addition to these, consultation will seek to engage the wider community in order to encompass comprehensive public engagement. The North Essex Authorities may additionally wish to invite comments from focussed groups, relevant stakeholders and interested parties. The detailed arrangements for consultation are to be determined by the North Essex Authorities. The environmental authorities and public are to be given 'an early and effective opportunity' within appropriate time-frames to express their opinion. This includes the specific notification of the consultation documents and timeframes to those persons or bodies on the 'consultation databases' of the three LPAs. This reflects those persons or bodies who have commented on the SA in previous consultation stages.

PLEASE NOTE:

All comments on the content of this Environmental Report should be sent to each authority's online portal in line with the consultation arrangements of each's Local Plan Draft Publication consultation. Where consultation periods differ between each authority, the following links may need to be checked once consultation periods are live.

Comments should be focused on the detail of this SA that pertains to land use implications or issues relevant to each local authority area.

Please check the following links for more information, and direction to relevant consultation portals:

Regarding Braintree District Council:

https://www.braintree.gov.uk/info/200137/consultations/96/contribute_to_a_council_consultation

Regarding Colchester Borough Council:

<http://www.colchester.gov.uk/article/12650/Consultations>

Regarding Tendring District Council:

<http://www.tendringdc.gov.uk/consultation>

8.2 Adoption Statement

Upon adoption Local Plans will be accompanied by an Adoption Statement which will outline those monitoring indicators most appropriate for future monitoring of the Plan in line with Regulation 16 of the Environmental Assessment of Plans and Programmes Regulations 2004. In accordance with Regulation 16 of the Environmental Assessment of Plans and Programmes Regulations 2004, an Adoption Statement is required to address each of the following issues:

- How sustainability considerations have been integrated into the development plan document (Local Plan);
- How the options and consultation responses received on the development plan document (Local Plan) and sustainability appraisal reports have been taken into account;
- The reasons for choosing the development plan document (Local Plan) in light of other reasonable alternatives; and
- Monitoring measures.

8.3 Monitoring

The significant sustainability effects of implementing a Local Plan must be monitored in order to identify unforeseen adverse effects and to be able to undertake appropriate remedial action. The Sustainability Framework contained in this report includes suggested indicators in order to monitor each of the Sustainability Objectives, however these may not all be collected due to limited resources and difficulty in data availability or collection.

Guidance stipulates that it is not necessary to monitor everything included within the Sustainability Framework, but that monitoring should focus on significant sustainability effects, e.g. those that indicate a likely breach of international, national or local legislation, that may give rise to irreversible damage or where there is uncertainty and monitoring would enable preventative or mitigation measures to be taken.

The monitoring indicators for each broad sustainability theme relevant to the North Essex area are included below.

Table 24: Monitoring Measures

SA Objective	Potential Indicators
1. Create safe environments which improve quality of life, community cohesion	<ul style="list-style-type: none"> - All crime – number of crimes per 1000 residents per annum - Number of new community facilities granted planning permission - Number of new cultural facilities granted planning permission, including places of worship

SA Objective	Potential Indicators
2. To ensure that everyone has the opportunity to live in a decent, safe home which meets their needs at a price they can afford	<ul style="list-style-type: none"> - The number of net additional dwellings - Affordable housing completions - Number of zero-carbon homes completed - Number of additional Gypsy and Traveller pitches - Number of starter homes completed - Number of homes for older people completed
3. Improve health/reduce health inequalities	<ul style="list-style-type: none"> - Percentage of new residential development within 30mins of public transport time of a GP or hospital - Percentage of new residential development that adheres to Natural England's Accessible Natural Greenspace Standards - Percentage of new residential development within walking and cycling distance to schools - Percentage of new residential development within walking and cycling distance to sport and recreation facilities / open space
4. To ensure and improve the vitality & viability of centres	<ul style="list-style-type: none"> - Amount of completed retail, office and leisure development delivered (and in centres) - Amount of completed retail, office and leisure development across the three authority area
5. To achieve a prosperous and sustainable economy that creates new jobs, improves the vitality and viability of centres and captures the economic benefits of international gateways	<ul style="list-style-type: none"> - Amount of floor space developed for employment, sqm - Successful employment use applications in rural areas - Number of jobs created in the ports - Number of developments approved associated with the tourism sector - Level 2 qualifications by working age residents. - Level 4 qualifications and above by working age residents. - Employment status of residents. - Average gross weekly earnings. - Standard Occupational Classification.
6. To value, conserve and enhance the natural environment, natural resources, biodiversity and	<ul style="list-style-type: none"> - Impacts (direct and indirect) on designated sites - Amount of development in designated areas - Area of land offset for biodiversity

SA Objective	Potential Indicators
geological diversity	
7. To achieve more sustainable travel behaviour, reduce the need to travel and reduce congestion	<ul style="list-style-type: none"> - Percentage of journeys to work by walking and cycling and percentage of journeys to work by public transport
8. To promote accessibility, ensure that development is located sustainably and makes efficient use of land, and ensure the necessary infrastructure to support new development	<ul style="list-style-type: none"> - Number / amount of new homes / employment development completed at ward level within Growth / Regeneration Areas - Percentage of new development within 30 minutes of community facilities (as defined by each authority) - Percentage of new residential development within 30 minutes of public transport time of a GP, hospital, primary and secondary school, employment and a major retail centre - Additional capacity of local schools / incidents of new school applications
9. To conserve and enhance historic and cultural heritage and assets and townscape character?	<ul style="list-style-type: none"> - Percentage of new and converted dwellings on previously developed land - Number of listed buildings demolished, repaired or brought back to use, including locally listed buildings - New Conservation Area Appraisals adopted - Number of Listed Buildings, Scheduled Monuments, Conservation Areas, Registered Parks and Gardens (and percentage at risk) - Area of highly sensitive historic landscape characterisation type(s) which have been altered and their character eroded - Number of major development projects that enhance or detract from the significance of heritage assets or historic landscape character - Percentage of planning applications where archaeological investigations were required prior to approval or mitigation strategies developed or implemented
10. To make efficient use of energy and reduce contributions to climatic change through mitigation and adaptation.	<ul style="list-style-type: none"> - Total CO2 emissions - Renewable Energy Installed by Type - Number of zero carbon homes delivered
11. To improve water quality and address water	<ul style="list-style-type: none"> - Quality of Rivers (number achieving ecological good status) - Number of planning permissions granted contrary to the advice of the Environment

SA Objective	Potential Indicators
scarcity and sewerage capacity	- Agency on grounds of water quality
12. To reduce the risk of fluvial, coastal and surface water flooding	<ul style="list-style-type: none"> - Number of planning permissions granted contrary to the advice of the Environment Agency on flood defence grounds - Number of SuDS schemes approved by ECC
13. To improve air quality	- Number of Air Quality Management Areas
14. To conserve and enhance the quality of landscapes	<ul style="list-style-type: none"> - Percentage of new and converted dwellings on previously developed land - Number of proposals permitted within areas noted for their high landscape value - Number of proposals permitted contrary to a desire to restrict coalescence
15. To safeguard and enhance the quality of soil and mineral deposits	<ul style="list-style-type: none"> - Percentage of new development on high quality agricultural land (ALC) - Number of developments proposed within MSAs - Contaminated land brought back into beneficial use, hectares

Appendix 1: Appraisal of the Garden Community Options and Alternative Permutations

Why Garden Communities?

Meeting Objectively Assessed Need (OAN) for Housing

Within the Issues and Options Local Plans of Colchester, Braintree and Tendring, the option of Garden Communities, or 'new settlements' was explored, in response to the emerging growth needs identified across the Housing Market Area (HMA), as identified in the initial work from a Strategic Housing Market Assessment (SHMA) 2014. This SHMA provided estimated requirements representing a significant increase over the previous targets of the three authorities. These requirements were identified 'objectively', responding to the Objectively Assessed Need (OAN) for housing as required to be identified across HMAs in the NPPF.

Further work was carried out to focus requirements for the three authorities' Plans, reflecting up-to-date evidence available on population growth, and housing supply and demand. This was presented in the 'Braintree District Council, Chelmsford City Council, Colchester Borough Council, Tendring District Council - Objectively Assessed Housing Need Study (Peter Brett Associates)' which was finalised in July 2015.

'Traditional' Growth Solutions and 'New Towns'

The authorities have a strong history of making use of, or redeveloping previously developed land (PDL). As a result of this, the authorities have a very limited and diminishing supply of PDL (brownfield sites) that can contribute to the accommodation of the additional growth requirements. Objectively Assessed Need (OAN) is at a level which means that brownfield development can only reasonably accommodate a very small proportion of total growth requirements.

Focussing growth or new development within and around existing settlements proportionately represents the foremost strategy to deliver sustainable development spatially within this Section One and the respective Section Twos of the North Essex Authorities. This traditional approach to development ensures that new communities are located in a sustainable manner in terms of distances to existing infrastructure, jobs and services. However as urban areas continue to expand further into the countryside similarly can development become more distanced from centres, and put pressure on existing infrastructure and services. Whereas the principle of focusing development in this manner is established as a traditional solution to meeting housing needs, growth requirements are such that this would have to occur exponentially over the plan period and beyond. In short, it can not be seen as the solution to meeting housing needs forever.

The distribution of growth within and around existing settlements can be seen as meeting short-medium needs within the context of Objectively Assessed Need (OAN) for housing over the plan period. With housing needs so high in the North Essex Authorities, issues surrounding the sustainability of any further expansion of existing settlements were quickly recognised in the plan-making processes of the North Essex Authorities,

particularly regarding the impacts on existing infrastructure.

The NPPF requires OAN to be met in full across the Housing Market Area (HMA). The position of the LPAs in maintaining and identifying a 5 year housing land supply (as additionally required by the NPPF) was such that the North Essex Authorities identified that solutions to meeting housing needs would have to be addressed through new settlements. This approach was decided to address the need for new development to meet the shortfalls in meeting OAN in the strategic area in the latter stages of the plan period and beyond, whilst also maximising sustainability through planning at a scale or critical-mass that could deliver the infrastructure required to support such growth outright without affecting the viability of proposals. This approach seeks to avoid the pitfalls of more traditional development, delivering communities that are self-sustainable and with the principle that infrastructure would be delivered first in each new community's progression.

In addition to the notion of 'traditional approaches' to strategic growth, as set out above, this SA explores the differences in sustainability of 'new towns' against the Garden Community model. New towns in context represent development at the same scale, but without the interventionist approach as adopted by the North Essex Authorities.

The Principle of 'Garden Communities' in Context

It is vital that new developments which accommodate the housing growth required create sustainable, well-designed communities, supported by the appropriate infrastructure. In response to Paragraph 52 of the National Planning Policy Framework (NPPF), the notion of new settlements, or 'Garden Communities', is established. Paragraph 52 of the NPPF states,

'The supply of new homes can sometimes be best achieved through planning for larger scale development, such as new settlements or extensions to existing villages and towns that follow the principles of Garden Cities.

Working with the support of their communities, local planning authorities should consider whether such opportunities provide the best way of achieving sustainable development'.

More recently, and in addition to the content of the NPPF, the Housing White Paper (February, 2017) states of Garden Villages, in Section 1.35,

'We need to make the most of the potential for new settlements alongside developing existing areas. Well-planned, well-designed, new communities have an important part to play in meeting our long-term housing needs. Provided they are supported by the necessary infrastructure, they are often more popular with local communities than piecemeal expansion of existing settlements.'

The Housing White Paper adds that,

'The Government is interested in the opportunities that garden cities, towns and villages might offer for bringing large-scale development forward in ways that streamline planning procedures and encourage locally-led, high quality environments

to be created.'

In October 2016 the Leaders and Chief Executives of Braintree, Colchester, Tendring and Essex Councils asked Lord Kerslake to lead a peer review to look at their approach to delivering Garden Communities in North Essex. The 'North Essex Garden Communities Peer Review' (Lord Bob Kerslake Published: January 2017) acknowledges the principle of Garden Communities being required in the strategic area. In setting the context for the review, the report states that,

'In common with many areas of the UK, Essex faces a significant challenge to deliver the required number of homes to sustain both its economic aspirations and the needs of its population. Traditional approaches to housing development have led to problems with delivery and sustainability. The four councils have entered into a collaborative partnership to deliver a significant proportion of the housing required for this part of Essex on Garden Community principles, together with the economic and employment opportunities and the transport and community infrastructure to support these new communities.'

Should there be 'Garden Communities', 'New Towns' or more 'Traditional Approaches' to Strategic Scale Growth in the North Essex Area?

As stated in the above sub-sections, 'traditional approaches' to strategic scale growth often respond to expansions of existing urban areas and other settlements within the strategic area. Whereas this is an established approach and sustainable notionally, the OAN requirements of the strategic area are sufficiently high that questions have to be asked of the sustainability of growth in such areas, particularly socially and environmentally. New Towns respond to strategic growth delivered in a more traditional manner than the interventionist approach adopted by the North Essex Authorities in ensuring compliance with the Garden City model.

It is appropriate and necessary to address such questions within this SA. The following table explores the comparative sustainability pros and cons of each approach in rationalising and aiding the North Essex Authorities in selecting the approach of allocating Garden Communities within their Local Plans. Please note that the criteria / objective based approach to assessing the sustainability of each approach is derived from Stage A of the SA process, as outlined and explained in Section 2 of this report.

The assessment follows a number of common assumptions to enable a comparable assessment. Firstly is that of scale, and the ability to meet OAN over the plan period. For this purpose, traditional approaches to the delivery of the growth required would have to meet that of the identified plan period shortfall of 7,500 as identified as the number developable through the Garden Communities in the latter stages of the plan period. Secondly, a key assumption surrounds the notion that the solutions have to be met beyond the plan period, in order to ensure solutions in the plan period do not exacerbate sustainability issues beyond 2033. Thirdly, specific locations are not taken into account within this assessment, which explores principles notionally rather than attempt to compare the sustainability merits of developing different areas of land as identified throughout the plan-making process. Such comparisons are explored in other sections of this SA and the LPA's respective Section Two SAs as appropriate and against criteria more specifically designed for this purpose. This assesses and compares options on a 'like with like' basis. Further to specific locations not being identified or used in the following appraisal, it must also be assumed that the level of growth required

would lead to the need to expand and extend a wide range of existing settlements, including those in more rural areas commensurate to a comparable level of existing population and sustainability (in the form of services) across the three authority's settlement hierarchies.

For the purposes of this assessment, impacts are highlighted using the following key:

Impact	Symbol
The approach is likely to meet the sustainability criteria.	+
It is uncertain / unknown whether the approach is likely to meet the sustainability criteria	?
The approach is unlikely to meet the sustainability criteria.	-
No impact.	N

Commentary is also included on a sustainability objective basis.

Table 25: 'Garden Communities', 'New Towns' or 'Traditional Approaches' to Strategic Scale Growth

Sustainability Objective	Sustainability Criteria	'GCs'	'New Towns'	'Traditional Approaches'
1. Create safe environments which improve quality of life, community cohesion	Will it improve / supply community facilities for young people?	+	+	?
	Will it increase cultural activities or suitable development to stimulate them?	+	+	+
	Will it support cultural identity and social inclusion?	+	+	-
	Will there be measures to increase the safety and security of new development and public realm?	+	+	+
Commentary	A key benefit to the notion of Garden Communities is that existing communities are comparably less affected than those that will experience strategic scale growth in neighbouring areas. This is also true of New Towns. Negative impacts on existing communities through urban expansion is likely to increase exponentially at the levels of growth required, resulting in issues surrounding social inclusion. The scale and principles of Garden Communities is such that coalescence with existing settlements can be minimised, and this can also be seen as equally valid for New Towns			

Sustainability Objective	Sustainability Criteria	'GCs'	'New Towns'	'Traditional Approaches'
	through general planning policy principles. The notion and scale of Garden Communities and New Towns can similarly ensure the inclusion of a number of community facilities that otherwise would not be likely to be forthcoming through the delivery of smaller growth solutions due a lack of available land.			
2. To ensure that everyone has the opportunity to live in a decent, safe home which meets their needs at a price they can afford	Will it increase the range and affordability of housing to support the growing population and for all social groups?	+	+	?
	Does it respond to the needs of an ageing population?	+	?	?
	Will it provide appropriate rural affordable housing?	?	?	-
	Will it deliver well designed and sustainable housing?	+	+	-
	Will it contribute to meeting Gypsy and Traveller pitch requirements of the GTAA?	+	?	-
Commentary	<p>At the scale of growth required to meet OAN, it is unlikely that traditional approaches to growth focused in and around existing settlements would be able to provide rural affordable housing in an appropriate manner, stretching the definitions of what could be considered appropriate and proportionate for the majority of smaller settlements within the three authority's settlement hierarchies. Similarly, aspirational targets for affordable housing would be unlikely to be appropriate in the majority of such settlements, with a greater possibility of higher affordable housing thresholds being viable through exploring new settlements. Garden Communities and New Towns can ensure that affordable housing can be appropriately located with the context of a whole settlement, through masterplanning, rather than being located disparately in peripheral or marginal areas of existing settlements. The notion of Garden Communities and New Towns can also ensure that housing can be well related to the new supporting infrastructure, services and facilities that they will be required to provide. This is also true of considering the needs of Gypsy and Traveller communities within Garden Communities, to ensure access to facilities. In contrast it can be considered comparably unlikely that traditional approaches to strategic growth and New Towns, with more reliance on market forces, would provide accommodation for Gypsies and Travellers as well as more broadly in regard to the requirements for a mix of dwelling types (including for older people). The relationship of development and the surroundings regarding design can be considered more appropriate in the context of Garden Communities, particularly surrounding densities. Arguments as to what can be considered 'proportionate' aside, at the scales of growth required to meet OAN a focus on the expansion of existing settlements only is</p>			

Sustainability Objective	Sustainability Criteria	'GCs'	'New Towns'	'Traditional Approaches'
	likely to result in development at densities that are not appropriate in consideration of local characteristics, particularly in more rural settlements. This is also likely to further affect the delivery of a range of housing types.			
3. Improve health / reduce health inequalities	Will it ensure access to health facilities?	+	?	?
	Will it ensure access to sport and recreation facilities, open space and accessible green space?	+	+	?
	Will it encourage access by walking or cycling?	+	+	?
Commentary	<p>Access to health services is an important consideration in the location of new development, both in terms of availability in close proximity and those that have existing capacity. It should be acknowledged however that the planning system can not ensure or determine the provision of new health facilities as part of development schemes. With this in mind, the assessment of Garden Communities, New Towns and traditional approaches to growth are based on an assumption regarding delivery models. Regarding Garden Communities, the model is that LPAs essentially act as the developer in their promotion and delivery. This model allows collaborative working and consultation with the appropriate health service providers and commissioning groups. Large scale schemes in this regard also identify issues regarding existing capacity and identified need for health facilities early on in the process, as opposed to issues becoming apparent to their full extent once the cumulative impacts from a larger number of smaller developments are known. The availability of land for new health facilities is similarly an issue regarding more traditional approaches to strategic growth. This is also the case regarding sport and recreation facilities, open space and accessible green space requirements on a site by site basis. It is considered that the scale of Garden Communities and New Towns, in addition to their proposed delivery model, ensures that sport and recreation facilities, open space and accessible green space requirements are of a scale appropriate to the level of growth, and that all new facilities are located in accessible locations to housing by walking and cycling.</p>			
4. To ensure and improve the vitality & viability of centres	Will it prevent loss of retail and other services in rural areas?	?	?	+
	Will it promote and enhance the viability of existing centres by focusing development in such centres?	+	+	+

Sustainability Objective	Sustainability Criteria	'GCs'	'New Towns'	'Traditional Approaches'
	Will it locate development in close proximity to town centres?	?	?	+
	Will it locate development within easy public travelling distance to town centres?	+	?	?
	Will it improve public transport networks to town centres?	+	?	?
Commentary	<p>The vitality and viability of centres can be viewed as benefitting from increased footfalls and from specific regeneration schemes. A focus on existing settlements through traditional approaches will in principle support those centres, although it should be acknowledged that the Garden Communities, developed in line with Garden City principles (as set out later on this report), will be developed in line with ensuring public transport choices to existing centres in order to support the function of town centres. This is also a key criterion in the identification of appropriate broad locations for Garden Communities, and their selection, by the North Essex Authorities. It is uncertain whether New Towns would seek such a location in the first instance. Garden Communities and New Towns can both be expected to come forward in the latter stages of the plan period and beyond, with short-medium term growth directed to existing settlements proportionately. With this in mind, the Local Plans of Braintree, Colchester and Tendring will seek to ensure the benefits from both the options explored in this section.</p>			
5. To achieve a prosperous and sustainable economy that creates new jobs, improves the vitality and viability of centres and captures the economic benefits of international gateways	Will it improve the delivery of a range of employment opportunities to support the growing population?	+	+	?
	Will it tackle employment associated deprivation?	N	N	N
	Will it enhance the area's potential for tourism?	N	N	N
	Will it promote development of the ports?	N	N	N
	Will it encourage the rural economy and diversification of it?	?	?	+
	Will it support business innovation, diversification, entrepreneurship and	+	+	?

Sustainability Objective	Sustainability Criteria	'GCs'	'New Towns'	'Traditional Approaches'
	changing economies?			
	Will it improve existing training and learning facilities and/or create more facilities?	+	+	-
	Will the employment opportunities available be mixed to suit a varied employment skills base?	+	+	?
Commentary	<p>Regarding the provision of employment opportunities as part of new development, Garden Communities and New Towns can be considered to have a better possibility of ensuring this is not only integrated, but in the case of Garden Communities also in appropriate locations for sustainable transport infrastructure. In contrast, more traditional approaches can be seen as having comparably more difficulty should appropriate locations not be forthcoming. There will also be uncertainties surrounding the availability of land, which can be seen as exponentially less sustainable as more peripheral locations are sought in the latter stages of the plan period and beyond. At the quantum of growth required, it can be expected that all existing settlements that currently experience a certain level of population and services will be required for expansion across the strategic area. This will include rural settlements and there can be expected to be some positive implications regarding rural employment growth as a result, however likely not across a range of sectors as required. Comparably, there will be uncertainties surrounding the Garden Communities and New Towns regarding their status within the countryside and whether employment at such locations as appropriate would constitute or reflect rural employment needs. The scale of Garden Communities and New Towns, and the concentration of growth requirements at a few locations across the strategic area allows there to be significant infrastructure planned within the wider developments, and in early stages of each scheme's development (however there is less chance of this being ensured through New Towns in the absence of a specific 'infrastructure first' commitment). There is also the opportunity for development to be supported by the means for effective home working. For this reason, positive impacts have been highlighted for business innovation and learning facilities. More traditional approaches of extensions to existing settlements will comparably have more difficulty in delivering such facilities due to assumptions regarding the availability of land in sustainable locations. Thresholds for the delivery of new infrastructure are also unlikely to be met in some instances due to a reliance on a larger number of smaller sites. Whereas facilities are likely to be provided through a cumulative requirement, there is further uncertainty surrounding where these can be provided with inclusive access to all new communities, and whether such access has been effectively ensured throughout the design and layout of multiple developments.</p>			

Sustainability Objective	Sustainability Criteria	'GCs'	'New Towns'	'Traditional Approaches'
6. To value, conserve and enhance the natural environment, natural resources, biodiversity and geological diversity	Will development have a potential impact on a national, international or European (Natura 2000) designated site (SPA, SAC, Ramsar, SSSI)?	?	?	-
	Will it maintain and enhance sites otherwise designated for their nature conservation interest?	+	+	-
	Will it conserve and enhance natural/semi natural habitats?	+	+	-
	Will it conserve and enhance species diversity, and in particular avoid harm to indigenous BAP priority species?	+	+	?
Commentary	<p>For the purposes of comparison, more positive impacts have been highlighted for Garden Communities and New Towns due to their scale and scope to incorporate significant areas of recreational land to offset any recreational impacts on designated sites; the AA adds that Recreation Avoidance and Mitigation Strategy (RAMS) is required for the strategic area, which may include increased recreational land at Garden Communities / New Towns. More traditional approaches to strategic growth, in particular a possibly large number of comparably smaller extensions to existing settlements (increasing exponentially over the plan period to meet trend-based future growth needs), are unlikely to be able to factor in such recreational land requirements on site in all instances and to the scale required without significantly affecting the scale of developable areas. Similarly are such approaches unlikely to offer a significant contribution to mitigate impacts on more local designations for nature conservation. Garden Communities and New Towns have been assessed, once more due to their scale, as having the capability to expand and enhance such designations, and integrate a network of green and blue infrastructure. This is primarily linked to the ability to not only mitigate negative impacts, but ensure enhancement due to their scale.</p>			
7. To achieve more sustainable travel behaviour, reduce the need to travel	Will it increase and/or improve the availability and usability of sustainable transport modes?	+	?	?
	Will it seek to encourage people to use alternative modes of transportation other than private vehicle?	+	+	?

Sustainability Objective	Sustainability Criteria	'GCs'	'New Towns'	'Traditional Approaches'
and reduce congestion	Will it lead to the integration of transport modes?	+	?	-
	Will it improve rural public transport?	?	?	?
	Will it increase the uptake or viability of walking and cycling as methods of transportation, through new infrastructure or integration?	+	+	-
Commentary	<p>A key principle of Garden Communities is ensuring the integration and enhancement of public transport networks. This not only ensures significant positive impacts for the new communities, maximising the potential for modal shift, but also offers wider benefits. This is considered less likely to be the case for New Towns, where broad locations may not be identified with this specifically in mind. The implications of scale and possibilities in focusing the level of growth required to a few strategic locations ensures that jobs, services and facilities are integrated into the communities as appropriate. In the case for Garden Communities and New Towns, this similarly ensures that sustainable transport, walking and cycling become more viable for a large number of everyday needs through the provision of such needs on site. In contrast, more traditional approaches are unlikely to have the scale to make this viable; however benefits exist in the form of existing public transport infrastructure in close proximity. Likely issues exist however in the integration of new and existing developments, and a need for a joined up approach particularly regarding safe and secure walking and cycling routes.</p>			
8. To promote accessibility, ensure that development is located sustainably and makes efficient use of land, and ensure the necessary infrastructure to support new development	Will it contribute positively to reduce social exclusion by ensuring access to jobs, shopping, services and leisure facilities for all?	+	+	?
	Will it concentrate development and facilities where access via sustainable travel is greatest?	+	?	?
	Will it minimise congestion at key destinations / areas that witness a large amount of vehicle movements at peak times?	+	+	-
	Would the scale of development require significant supporting transport	-	-	?

Sustainability Objective	Sustainability Criteria	'GCs'	'New Towns'	'Traditional Approaches'
	infrastructure in an area of identified need?			
	Will it ensure adequate school places (through expansion / new facilities) and early years provision to support growth?	+	+	-
	Will it ensure the required improvements to utilities infrastructure?	?	?	?
	Will it ensure the required improvements in capacity to GP services?	?	?	-
	Will it provide a suitable amount of sports, recreational, leisure and open space facilities?	+	+	-
Commentary	<p>Traditional approaches to strategic level growth are likely to lead to development becoming more and more distanced from centres, with a deteriorating level of accessibility over time. With this in mind, it is important to reflect the timescales relevant to the Section One for Local Plans, with solutions to growth needs being sought beyond the plan period and to meet future growth requirements. Nonetheless, traditional approaches would still be required to have strategic road access to be suitable and appropriate, with an intention towards significant modal shift in to more sustainable transport methods. For this reason, impacts are largely uncertain in the context of this high level appraisal, reflecting a broad level of existing sustainability but discounting broad or specific locations for the expansion of existing settlements. Despite this, such a focus on existing settlements, particularly that of Colchester, can be expected to increase traffic through AQMAs. Garden Communities and New Towns can be assessed in a slightly different way, in so far as they require a level of self-sustainability and the integration of new job opportunities with additional new services, facilities and infrastructure. This is only possible at the scales required of focusing the growth requirements to a number of single areas. For this reason, positive impacts have been highlighted for Garden Communities regarding accessibility and infrastructure, with uncertain impacts highlighted for New Towns that may not be specifically identified with existing transport infrastructure in mind. Negative implications are highlighted for both Garden Communities and New Towns regarding the need for significant supporting transport infrastructure. These impacts are not however reflective of the deliverability of Garden Communities or New Towns in the strategic area, or whether these requirements are a barrier to the principle of development (or indeed insurmountable), but reflective of the scale of what is needed to support the level of growth.</p>			

Sustainability Objective	Sustainability Criteria	'GCs'	'New Towns'	'Traditional Approaches'
9. To conserve and enhance historic and cultural heritage and assets and townscape character?	Will it protect and enhance designations, features and areas of historical, archaeological and cultural value in both urban and rural areas?	?	?	-
	Will it have a negative impact on the significance of a designated historic environment asset or its setting?	?	?	?
	Will it enhance the range and quality of the public realm and open spaces?	+	+	-
	Will it reduce the amount of derelict, degraded and underused land?	N	N	N
	Does it encourage the use of high quality design principles to respect local character?	+	+	?
	Will / can any perceived adverse impacts be reduced through adequate mitigation?	+	+	-
Commentary	<p>Impacts on the historic environment are largely relevant on a site by site basis only, however it can be expected that Garden Communities and New Towns will have a greater possibility of impacting on a larger number of assets due to their scale. Despite this, at the scale of growth required traditional approaches can also be seen as having potential negative impacts associated with their relationship with existing developments, some of which are likely to have some level of historic importance due to the prevalence of historic settlements in the strategic area. Historic settlements as assets in themselves can also be expected to have negative impacts associated with any ribbon development and aspirations to maintain settlement shape and form. In a broader context, impacts can be perceived as commensurate to the scope for mitigation between the options, with positive impacts highlighted for Garden Communities and New Towns commensurate to their scale, and more negative implications surrounding traditional approaches. It should be noted however that should impacts be significant and mitigation unacceptable, then planning permission is unlikely to be granted for either option or proposals in need of revision. The scale of Garden Communities and New Towns and the ability to plan for integrated sustainable outcomes from the outset of the process ensures that an attractive and effective public realm can be ensured throughout; this is likely to be comparably difficult for smaller traditional development schemes regarding integration with existing areas and open space requirements having implications on the size of developable areas. Garden Community, New Town and more traditional approaches to strategic growth can be expected to have negative impacts on the use of brownfield land, however</p>			

Sustainability Objective	Sustainability Criteria	'GCs'	'New Towns'	'Traditional Approaches'
	it should be acknowledged that all options are only being explored due to the absence of available brownfield land and its allocation for development purposes in the earlier stages of the plan period in all scenarios (including allowances made for windfall sites in the Section Twos of the LPA's Local Plans).			
10. To make efficient use of energy and reduce contributions to climatic change through mitigation and adaptation.	Will it reduce emissions of greenhouse gases by reducing energy consumption?	?	?	?
	Will it lead to an increased generation of energy from renewable sources?	?	?	?
	Will it encourage greater energy efficiency?	+	+	+
	Will it improve the efficient use of natural resources, minimising waste and promoting recycling?	+	+	+
Commentary	The principle of Garden Communities, New Towns and more traditional approaches to delivering strategic level growth can be expected to be energy efficient and minimise waste and promote recycling. Uncertain impacts have been highlighted for reducing energy consumption and renewable energy where this detail is more relevant to individual schemes.			
11. To improve water quality and address water scarcity and sewerage capacity	Will it lead to no deterioration on the quality of water bodies?	0	0	0
	Will water resources and sewerage capacity be able to accommodate growth?	?	?	?
Commentary	Associated with the level of growth required, Garden Communities, New Towns and more traditional approaches to delivering strategic growth can be expected to have uncertain implications on water quality. This is informed by the HRA Screening Assessment and Appropriate Assessment (AA) completed for the Plan. The AA concludes that, 'whilst there are currently issues regarding capacity of water recycling centres in both Colchester Borough and Tendring District, with subsequent risks to European sites associated with changes in water quality, the safeguards which will be included within the Section 2 Local Plans for each, will ensure that a given development will not proceed until the necessary infrastructure upgrades have been provided as necessary in accordance with Anglian Water and Environment Agency advice. Therefore, in conclusion, the measures provided in the Section 2 Local Plans will also provide sufficient			

Sustainability Objective	Sustainability Criteria	'GCs'	'New Towns'	'Traditional Approaches'
	certainty that the overall strategic growth proposed in North Essex as part of the Section 1 for Local Plans will not result in significant adverse effects on the Stour and Orwell Estuaries SPA/Ramsar, Colne Estuary SPA/Ramsar, or Essex Estuaries SAC as a result of changes in water quality.' Regarding water resource and sewerage capacity, all option scan be expected to be similar in terms of impacts, where infrastructure capacities and improvements are related to the level of growth in the Strategic Area.			
12. To reduce the risk of fluvial, coastal and surface water flooding	Will it include Sustainable Drainage Systems (SuDS) in new developments and will their integration be viable?	+	+	+
	Will it avoid development in areas at risk of flooding (fluvial, coastal, surface water)?	+	+	+
	Will it avoid increasing flood risk (fluvial, surface water, groundwater) in areas away from initial development?	+	+	+
Commentary	Garden Communities, New Towns and traditional approaches to delivering strategic growth can be expected to incorporate SuDS as required. Similarly developable areas would have to avoid those areas at risk of flooding as a prerequisite of any successful planning application.			
13. To improve air quality	Will it improve, or not detrimentally affect air quality along the A12 or A120?	?	?	?
	Will it direct growth away from AQMAs?	+	+	-
	Will it seek to improve or avoid increasing traffic flows generally?	+	+	+
Commentary	The sustainability of Garden Communities and New Towns is largely dependent on accessibility to the strategic road network in the strategic area; as a result access to one of the A120 or A12 is likely to be required of such schemes. With this in mind, uncertain impacts have been highlighted for the resultant air quality impacts along these roads associated with strategic scale development. This also takes into consideration the requirement for significant public transport network improvements to sustain and serve each Garden Community in kind, as required by Garden City principles. Whereas an assumption is made that these principles are not used to shape the development of New Towns in this assessment, similarly will these be required to ensure that development is sustainable and suitable. In contrast, traditional approaches to growth can be			

Sustainability Objective	Sustainability Criteria	'GCs'	'New Towns'	'Traditional Approaches'
	<p>expected to be more numerous and individually smaller in scale; this will ensure a similar degree of uncertainty at this stage, where access to the A12 or A120 would still be required (albeit not necessarily directly), and the cumulative impacts could be significant without any single scheme being of a scale to ensure additional junctions or significant improvements. The focus of development to existing settlements, in particular Colchester as the principle settlement in the strategic area (and proportionately that which can be expected to experience the most growth) will also have negative implications surrounding traffic movements through AQMAs. Despite this, both options can be expected to seek to improve or avoid increasing traffic flows generally.</p>			
14. To conserve and enhance the quality of landscapes	Will landscapes sensitive to development be protected?	-	-	-
	Will it lead to rural expansion or development outside development boundaries/limits that increases coalescence with neighbouring settlements?	?	?	?
	Is the scale / density of development in keeping with important and valued features of the local landscape?	?	?	?
Commentary	<p>A broad assessment of landscape implications for the principle of Garden Communities, New Towns and traditional approaches highlights that all options will have negative landscape implications, pending more detailed assessment of specific sites. The impacts identified here reflect the scale of growth required at the plan level. Garden Communities and New Towns represent large scale greenfield development, where a more piecemeal approach of a larger number of smaller extensions to existing settlements will also see the loss of greenfield land, with additional possible implications surrounding the lack of available land to successfully mitigate impacts, and the reality that these impacts would be realised for a larger number of existing communities. It should be reiterated at this point however that the principle of extensions to existing settlements is not in itself unsustainable regarding landscape impacts, but impacts raised are more indicative of the amount of extensions required to meet the levels of growth within the plan period and beyond. Issues surrounding coalescence are similar, however it should be noted that impacts can be mitigated at the Garden Community scale in the incorporation of required measures and safeguarded land to prevent sprawl. More traditional approaches to strategic growth are unlikely to be acceptable in principle should coalescence be a concern and similarly unlikely to be granted planning permission. The secondary effects of this diminish the likelihood of this being a suitable option at the scales of growth required, or else would lead to increases in density on acceptable areas of land. Garden Communities in principle would not lead to unacceptable densities on the overall site and this can also be expected to be the case for New</p>			

Sustainability Objective	Sustainability Criteria	'GCs'	'New Towns'	'Traditional Approaches'
	Towns; however careful consideration should be given to the suitability of densities on developable areas in reflection of the wide range of other land uses required by Garden City principles.			
15. To safeguard and enhance the quality of soil and mineral deposits?	Will it avoid the loss of high quality agricultural land?	-	-	-
	Will it avoid the sterilisation of mineral deposits / is the site within a Minerals Safeguarding Area (MSA)?	N	N	N
	Will it support or lead to the remediation of contaminated land, avoiding environmental pollution or exposure of occupiers or neighbouring land uses to unacceptable health risk?	N	N	N
Commentary	Garden Communities, New Towns and more traditional approaches to strategic growth can be expected to have negative impacts associated with the loss of agricultural land. Impacts related to mineral deposits and contaminated land have not been identified at this broad level and can only be assessed on a specific site by site basis.			

The Identification of Reasonable Garden Community Options

The North Essex Authorities allocate three Garden Communities at this stage of the plan-making process: 'Tendring / Colchester Borders', 'Colchester / Braintree Borders' and 'West of Braintree'. Alternatives have been identified through the three authorities' respective Local Plan call-for-sites processes. Some were rejected outright due to scale, and explored within the context of Section Two allocations. The North Essex Authorities also explored alternative locations in the formulation of the Issues and Options stages of the Plans, but these were rejected early on in the process due to deliverability considerations including the availability of sites, and an overall evaluation of the combination of allocations and policies that would produce the most sustainable pattern of growth.

Garden Community options have been validated throughout the Sustainability Appraisal process (see Annex C) and have been subject to public consultation throughout the plan-making process. Public views have been taken into account throughout the SA process, resulting in the content and findings of this report. These views, coupled with updates to the Section One plan evidence base, have resulted in the re-assessment of all options at this stage, and these are presented within this report.

The threshold for the identification of what constituted a reasonable Garden Community option is 5,000 dwellings. This is broadly based on that of the threshold for the required provision of a new secondary school from a mixed-use development in the ECC Developer's Guide to Infrastructure Contributions - Revised Edition 2016, and otherwise identified as representing a sufficient scale of development to meet the majority of day to day needs of new residents. This will ensure self-sustainability in providing sufficient new homes, fostering economic development, providing new and improved infrastructure, addressing education and healthcare needs and ensuring high quality outcomes.

The following represent all of the Garden Community options that were proposed by developers / landowners within the Strategic Area (please note that the indicative yields presented are for each option in its entirety and beyond those which can be delivered in the Plan period):

Table 26: The Garden Community Options

Option	Sub-Option	Reference number for purposes of assessment	Indicative dwelling yield and amount of mixed use / employment land (ha)	Reason for selection / rejection
Tending / Colchester Borders	Option 1: Southern Land Focus	GCEC1	- 6,611 homes - 7 ha mixed use - 5 ha employment land	The Tendring / Colchester Borders Garden Community has more opportunities for sustainable travel links into Colchester than other options, a major regional centre. The Garden Community is also in close proximity to the University
	Option 2: A133 to Colchester - Ipswich rail line	GCEC2	- 8,834 homes - 10 ha mixed use - 5 ha employment land	

Option	Sub-Option	Reference number for purposes of assessment	Indicative dwelling yield and amount of mixed use / employment land (ha)	Reason for selection / rejection
	Option 3: North to South wrap	GCEC3	<ul style="list-style-type: none"> - 11,409 homes - 13 ha mixed use - 7 ha employment land 	<p>and high quality employment opportunities. As one of the major centres in the region, Colchester offers a full range of facilities including a hospital and is a major shopping and cultural destination. This would provide high order services not on the garden community within a closer proximity with the opportunities for public transport, walking and cycling links.</p> <p>Colchester is also a major employer in the region and provides a good level and mix of employment opportunities. There is the opportunity to access these opportunities via public transport, walking and cycling.</p>
North Colchester	Option 1: East of Langham Lane focus	GCNC1	<ul style="list-style-type: none"> - 6,606 homes - 7 ha mixed use - 7 ha employment land 	<p>The discounting of the North Colchester site for a Garden Community was based on the negative environmental impacts of a large Garden Community on an area of significant landscape and environmental value.</p>
	Option 2: Maximum Land Take	GCNC2	<ul style="list-style-type: none"> - 10,132 homes - 10 ha mixed use - 10 ha employment land 	<p>Additionally, the deliverability and sustainability of Garden Communities was considered to be best served by their location in two distinct areas of the Borough as opposed to adjacent communities such as North Colchester.</p>
Colchester / Braintree	Option 1: North and South of A12 / Rail	GCWC1	<ul style="list-style-type: none"> - 16,861 homes - 9 ha mixed use 	<p>The Colchester Braintree borders site is in closer proximity to the mainline railway station at</p>

Option	Sub-Option	Reference number for purposes of assessment	Indicative dwelling yield and amount of mixed use / employment land (ha)	Reason for selection / rejection
Borders	Corridor Focus		- 10 ha employment land	<p>Marks Tey, which with upgraded facilities would give regular train links to London, Colchester and beyond within walking, cycling or bus rapid transport system to the station. There are also more opportunities for sustainable travel links into Colchester, a major regional centre of facilities and employment.</p> <p>The Colchester Braintree borders site is in closer proximity to Colchester. As one of the major centres in the region, Colchester offers a full range of facilities including a hospital and is a major shopping and cultural destination. This would provide high order services not on the garden community within a closer proximity with the opportunities for public transport, walking and cycling links.</p> <p>Colchester is also a major employer in the region and provides a good level and mix of employment opportunities. There is the opportunity to access these opportunities via public transport, walking and cycling.</p>
	Option 2: South of A120 and North of Marks Tey Existing Settlement	GCWC2	- 17,182 homes - 9 ha mixed use - 11 ha employment land	
	Option 3: South of A120 Focus	GCWC3	- 13,105 homes - 7 ha mixed use - 9 ha employment land	
	Option 4: Maximum Land Take	GCWC4	- 27,841 homes - 16 ha mixed use - 15 ha employment land	
West of Braintree	Option 1: Braintree DC only	GCWB1	- 9,665 homes - 12 ha mixed use - 10 ha employment land	<p>The West of Braintree garden community is suitable and deliverable. Further work will continue to be undertaken with Uttlesford District Council who will be shortly deciding whether to take forward additional land</p>

Option	Sub-Option	Reference number for purposes of assessment	Indicative dwelling yield and amount of mixed use / employment land (ha)	Reason for selection / rejection
	Option 2: Braintree DC and Uttlesford DC Land	GCWB2	<ul style="list-style-type: none"> - 12,949 homes - 16 ha mixed use - 13 ha employment land 	<p>within UDC. If UDC chose to take this option forward, then further evolutions of the proposals will take place, taking into account a wider development area.</p> <p>Officers have balanced the impacts of development, such as the loss of high quality agricultural land and the change in character of the area, with the benefits of the long term delivery of new homes, infrastructure and community facilities and consider that a new standalone garden community is suitable for West of Braintree and are recommending that this is taken forward in the Local Plan.</p>
CAUSE 'Colchester Metro Plan'	N/A - Option 1: Metro Plan submission	GCMP1	<p>6,000 to 8,000 dwellings proposed by CAUSE</p> <p>Note: Further exploration into the option has led to only a cumulative potential of 2,277 dwellings across the four settlements as identified by TDC's call-for-sites submissions within 10 minute walking distance of each rail station and an indicative density of 35 dwellings per hectare.</p>	The CAUSE option has been rejected due its inability to deliver the required growth, linked to deliverability / developability and the availability / lack of promotion of land within the model to the required scales. It is also not considered that a series of smaller developments can successfully combine to meet the requirements of sustainability / Garden City principles.
Monks	N/A - Option 1: Proposal as	GCMW1	- Up to 15,000 homes (5,151 homes in plan	The option at Monks Wood is currently located on the highly

Option	Sub-Option	Reference number for purposes of assessment	Indicative dwelling yield and amount of mixed use / employment land (ha)	Reason for selection / rejection
Wood	submitted		period) - 245,300m2 of non-residential (mix of commercial / retail / leisure etc.)	trafficked and single carriageway section of the A120. The only other roads in the vicinity are very rural lanes in the vicinity and no opportunity to access a site of this size by other routes. If the A120 project is to go ahead, 1 of the 5 options could see the new A120 run through the site, the other 4 would be distant from the site. Whilst any upgrade option would provide capacity on the existing A120 network, there are no guarantees that the project will go forward. With the exception of option A travel to the strategic highway network would need to be via Marks Tey to the east or Braintree to the west. In addition the project is not due to complete until 2026, so completions would not be able to start until that date. The employment market in Braintree is less strong than Colchester and major new employment areas are proposed on the west side of Braintree which is in close proximity to the West of Braintree garden community.

The Appraisal of Reasonable Garden Community (GC) Options – Creating a Level Playing Field

It should be noted that the appraisal of Garden Community options is not straightforward, in reflection of their delivery extending significantly beyond the plan period. This makes the identification of social, environmental and economic effects difficult to highlight accurately; however this SA does seek to address the strategic consequences and effects of each Garden Community at its full intended or submitted scale.

A lot of the available information and evidence commissioned for the Plan has been progressed in line with the allocated Garden Communities at this stage. In order to create a level playing field for the assessment of both allocated and alternative options, to the same level of detail, a lot of this information has not been considered within this appraisal. This includes the separate evidence base documents of the whole Local Plans of the three authorities as they area as they adopted different methodologies and the findings are localised to each LPA area and inclusive of Section Two content. These include:

- Infrastructure Delivery Plans
- Local Plan Transport Modelling
- Integrated Water Management Plans

The appraisal of the Garden Community Options has been undertaken using all available information that is relevant for use across all options. In order to ensure a fair and even appraisal of all options, the following evidence base documents were commissioned to aid option selection and the SA. These are highlighted below:

- A North Essex Concept Feasibility Study (AECOM) - July 2016. This study explored the feasibility of various Garden Community options at Tendring / Colchester Borders, North Colchester, Colchester / Braintree Borders and West of Braintree.
- Colchester Metro Town Evaluation of Alternatives (AECOM) – April 2017. This study explores the feasibility and deliverability / developability of the 'Metro Plan' option that was proposed by the Campaign Against Urban Sprawl in Essex (CAUSE). This study uses the same level of information as the July 2016 Concept Feasibility Study and concludes with headline considerations on development capacity, infrastructure requirement and overall assessment. This assessment uses a 10 minute walknet around each station as indicated by the CAUSE submission. This walknet utilises GIS to model walking networks around each station of Thorpe-le-Soken, Weeley, Great Bentley and Alresford. The walknet is determined based on data from the Department for Transport and was built up to include all roads (based upon data from the Ordnance Survey), Public Rights of Way and Bridleways (Essex County Council) within 1 km of the station. Any parts of the network deemed inaccessible for walking were removed from the analysis as constraints (for example motorways or primary roads). In addition an assumed walking speed of 3.1 mph was used in creating a Service Area for a 10 minute walking time around each station. An assessment of the total developable land was conducted. An initial review of the Call for Sites within Tendring identified parcels of land actively being promoted by existing landowners within the 10minute walknet, representing those only that are indicatively 'deliverable / developable.'

- Monks Wood, Braintree Evaluation of Alternatives (AECOM) – April 2017. This study explores the feasibility and deliverability / developability of the Monks Wood proposal as submitted for consideration during the Braintree District Council call-for-sites process. This study also uses the same level of information as the July 2016 Concept Feasibility Study and concludes with headline considerations on development capacity, infrastructure requirement and overall assessment.

Other evidence used in the appraisal of Garden Community Options in this SA has been identified only where comparable information can be utilised across all reasonable alternatives. Where the preferred / allocated Garden Community options from the previous Preferred Options stage have been progressed and form part of the focus of plan wide commissioned evidence, assumptions have been made in order to apply certain principles and tests that are applicable for those alternative options that are not the focus of such evidence.

These evidence base documents and assumptions are:

Document / Issue	Assumption
North Essex Garden Communities Movement and Access Study – 1 March 2017	That a large number of transport solutions that adhere to Garden City principles options are feasible for the preferred GCs (all sites and specific GCs), however all require a level of existing infrastructure in place for multiple modes of transport. This principle will be applied equally to those Garden Community options that are not considered within the scope of this study.
Deliverability / Developability	<p>The Garden Communities are predicated on the assumption that infrastructure will be provided and self-funded. Funding and infrastructure costs have not been considered within any other assessment criteria in order to focus on thematic sustainability impacts. The information utilised for the assessment of options regarding developability / deliverability in this SA is considered consistent to all options in terms of level of detail.</p> <p>Impacts regarding commercial viability of the options can be broadly said to be progressively more positive from east to west associated with property values, however such factors have not been considered in detail within this part of the SA for comparison purposes and to ensure more focused differentiation regarding developability considerations.</p>
Emerging Concept Frameworks	The emerging Concept Frameworks for the preferred Garden Communities have not been considered in the appraisal of options at this stage in order to utilise a consistent level of information available for all Garden Community options.
The detailed submissions	To further reflect a consistency of approach, the detailed information

Document / Issue	Assumption
	submitted for each site by the landowners / developers of each option have not been taken into account in those instances where they can be seen to offer different levels of information. As such, only those site boundaries and the quanta of development for each Garden Community have been taken from the respective submissions.

The following table sets out the appraisal of all the Garden Community options in the Strategic Area. In light of the above evidence, consultation responses at the Preferred Options stage, and also in light of the Concept Feasibility also listed above, instances have occurred where a re-assessment of each site has indicated a need to change the previous SA assessment. The previous and revised appraisals of Garden Community Options have been documented and explained in the following table.

Additional options were considered immediately prior to their identification through the Preferred Options consultation. The options were reassessed in line with emerging evidence on a comparable basis as identified above, and also the consultation responses within Annex C. Additionally, the re-assessment focuses more appropriately on a balance of on-site impacts with the possibility of adhering to Garden City principles, with an adapted approach to measuring these to better differentiate between options, particularly in broad areas.

Table 27: Impact on Sustainability Objectives: The Garden Community Options (Allocations & Alternatives)

1. Physical Limitations – Absence of insurmountable problems (e.g. access, ground conditions, flood risk, hazardous risks, pollution, contamination and air quality)	Tendring / Colchester Borders			North Colchester		Colchester / Braintree Borders				West of Braintree		Metro Plan	Monks Wood
	GCEC1	GCEC2	GCEC3	GCNC1	GCNC2	GCWC1	GCWC2	GCWC3	GCWC4	GCWB1	GCWB2	GCMP1	GCMW 1
Preferred Options Stage	?	?	?	-	-	?	?	?	?	+	+	N/A	N/A
Draft Publication Stage	?	?	?	?/-	?/-	?	?	?	?	?/-	?/-	-	?

Headline Impacts:**Tendring / Colchester Borders**

The broad area is well located in terms of existing access and the presence of strategic roads and those that permeate the broad area and those eastern parts of Colchester. There are however some severance issues related to the A120, A137 and the GEML. Flood risk is minimal, with only a concentration of fluvial flood risk associated with the Salary Brook, which would form the required separation between the Garden Community and Colchester / Greenstead. There may however be flood risk impacts in the north western parts of options GCEC2 and GCEC3. No other insurmountable concerns exist at this stage regarding ground conditions, hazardous risks, pollution, and contamination. There may however be some concerns regarding air quality associated with development in the broad location and resultant traffic movements into Colchester town; there are a number of AQMAs that exist at Brook St / Magdalen St, East St / Lower Ipswich Road and also the Harwich Rd / St Andrews Avenue junction. It has been considered that the options will generally have uncertain impacts at this stage in regard to both positive and negative impacts. Regarding water quality, the AA states that, 'the measures provided in the Section 2 Local Plans will also provide sufficient certainty that the overall strategic growth proposed in North Essex as part of the Section 1 for Local Plans will not result in significant adverse effects on the Stour and Orwell Estuaries SPA/Ramsar, Colne Estuary SPA/Ramsar, or Essex Estuaries SAC as a result of changes in water quality.'

North Colchester

The broad area is relatively free from physical constraints and limitations with no insurmountable concerns existing at this stage regarding ground conditions, hazardous risks,



pollution, and contamination. The presence of the A12 to the south of the site is beneficial to the sustainability of the broad area. Despite this, issues are prevalent regarding how access to strategic roads can be integrated successfully with the current network in north Colchester. This is also in light of the possible cumulative impacts of development at the scale required with recent (and planned) strategic scale development in north Colchester; there will be a need to restrict unnecessary traffic flows which could increase congestion along this strategically important route. It can be expected that the functionality of any forthcoming development at a Garden Community scale will be dependent upon bridging and facilitating sustainable linkages across the A12 connecting with Colchester to the south. There are also significant implications surrounding the existing 20ha Solar Farm on site which could afflict any scheme from being planned specifically to the requirements of Garden City principles and for this reason negative impacts are highlighted.

Colchester / Braintree Borders

Road infrastructure and junction access and capacity represent the main barriers to development at this broad location, although the presence of strategic roads in this area ensures that the location is broadly sustainable in principle. To some degree negative impacts can be expected to be partially eradicated through the planned highways infrastructure regarding the A12, however much also depends on the finalised route option for the A120 Braintree to the A12 scheme at this stage, and as such impacts are uncertain. Issues surrounding severance exist for all options, with comparably minor impacts highlighted for GCWC3 due to development not being proposed north of the existing A120. This again will largely depend on the re-routing of the A120. There are no other physical limitations relevant to ground conditions, flood risk, hazardous risks, pollution and contamination associated with the site that can not be adequately factored into any development of this scale through effective masterplanning. The re-assessment of the site at this stage concludes that the proposal would have both negative and positive impacts at the current stage. Negative impacts are not insurmountable in practice, however solutions may be less affordable than those at other locations explored as identified in the North Essex Garden Communities Movement and Access Study (2016). Should a compatible proposal be forthcoming regarding the finalised route option for the A120, then the options would have more definite and identifiable impacts regarding this sustainability objective.

West of Braintree

It is likely that a new A120/B1256 western junction and an interim A120/B1256 eastern junction upgrade will be required, however a full upgrade has been identified as not possible until the existing quarry on site is exhausted adjacent to the junction and restored. There are therefore implications regarding the allocated minerals extraction site within the broad location associated with both options, which has some additional issues surrounding intended restoration within the Minerals Local Plan and an accompanying Minerals Site Restoration for Biodiversity SPG. Despite this, the minerals site is temporary in nature and restoration proposals can be reconsidered or relocated in light of the additional wider sustainability benefits of a Garden Community in this location. Access arrangements to strategic roads are not direct, however the close proximity of the broad area to the A120 ensures that sustainable access can be ensured through effective masterplanning. There are no other physical impacts on the site that can not be similarly overcome. Despite this, a re-assessment of the site at the time of writing indicates that, and until the final restoration proposals of the quarry are known in light of the emergence of the area as a Garden Community option, there will now be some uncertain impacts regarding the options. It should be noted however that any successful compromise between the quarry requirements as stated in the Minerals Local Plan and those of Garden City principles will ensure that both options will likely fully meet this sustainability objective / Garden City



principle, as initially assessed at the Preferred Options stage.

The 'Metro Plan'

In summary, growth at each location does not respond well to access to the strategic road network, which is required in consideration of a need for inclusive, flexible choices for transport movements. Access to B-roads will additionally likely require junction improvements, and it is uncertain how successful growth corresponding to the expansion of existing settlements would integrate with existing infrastructure. Each site has a small element of fluvial flood risk (zones 2 and 3), associated with Holland Brook in Thorpe-le-Soken (although flood defences exist); Weeley Brook in Weeley and at the western edge of the broad area; Bentley Brook in Great Bentley; and Sixpenny Brook in Alresford. None of these areas are significant however; taking up a small percentage of the land within those are as explored at each broad location, however mitigation may have a more significant impact on available land for growth. Great Bentley however is almost entirely within a Groundwater Protection Zone (zones 1, 2 and 3). In light of the above, the option has been assessed as being unlikely to meet criteria without significant impacts, associated with inclusive access, groundwater issues at Great Bentley and the ability to avoid / mitigate areas of flood risk at each location.

Monks Wood

Road infrastructure and junction access and capacity represent the main barriers to development at this broad location, with the future of the A120 beneficial to the principle of development in this area, although no significant severance issues exist. Existing access and the road infrastructure currently serving the proposal site would need re-modelling entirely within any detailed proposal. Congestion on the A120 along this single lane stretch of the A120 towards Marks Tey railway station is a current issue, however measures to eradicate this will be forthcoming from the planned A120 dualling and re-routing should the options be selected for the A120 to continue along its current route. Currently only one of the five options for re-routing being explored would support the principle of development at the scale required in this location. If other options for the A120 re-routing were selected, then significant interconnectivity issues would be prevalent in connecting development to the strategic road network. There are no other physical limitations surrounding the site that can not be adequately factored into any development of this scale through effective masterplanning. The assessment of the site at this stage concludes that the proposal would be unlikely to fully meet criteria. And uncertain impacts have been assessed. Should a suitable proposal be forthcoming regarding the finalised route option for the A120 along its current route, then the option would have more definite and identifiable impacts.

2. Impacts – Acceptable impacts on high quality agricultural land, important landscape features, townscape features, sites of nature conservation interest and heritage assets	Tendring / Colchester Borders			North Colchester		Colchester / Braintree Borders				West of Braintree		Metro Plan	Monks Wood
	GCEC1	GCEC2	GCEC3	GCNC1	GCNC2	GCWC1	GCWC2	GCWC3	GCWC4	GCWB1	GCWB2	GCMP1	GCMW 1
Preferred Options Stage	?	?	?	?	?	?	?	?	-	?	?	N/A	N/A
Draft Publication Stage	?	?	?/-	-	-	?/-	?/-	?	-	?/-	?/-	- -	?/-

Headline Impacts:

Tendring / Colchester Borders

Options GCEC1, GCEC2 and GCEC3 all contain Grade 1 Agricultural Land (determined 'excellent' by Natural England) along much of the eastern boundary; however the requirements for a belt of countryside to prevent sprawl has scope for its protection. The existing natural landscape and ecological features within the options such as Salary Brook, Welsh Wood, woodland, ancient woodland and a network of intact hedgerows and associated veteran trees, land drains and ditches, if protected, conserved and enhanced, have the potential to form key landscape structuring components of the Garden Community and related green infrastructure network. Although these features could be considered constraints, such an established network would be considered a considerable benefit to the wellbeing of future communities, and it should be noted that the features enable the option to adhere positively to Garden City Principles. Natural England's National Character Area Profile: Northern Thames Basin, in which this area lies, indicates that the rural urban fringe should be conserved and enhanced through the spatial planning process and through good design in development. This indicates that the principle of development is acceptable. For the purposes of comparison, those options with a larger scope have both the potential for larger constraints and opportunities, although it should be noted that GCEC3 contains a SSSI (Bullock Wood) which is likely to require more sensitive consideration in regard to preservation and enhancement as part of a belt of countryside to prevent coalescence with Colchester. The HRA indicates that the site is within the Essex Estuaries SAC and Colne Estuary SPA / Ramsar zones of influence, and further suggests that there could be recreational pressure on the SAC resulting from the scale of development in this area and visitors to the estuary. The AA concludes that mitigation is possible regarding the loss of off-site habitats. It states that, 'wintering bird surveys will be required for Tendring Colchester Borders Garden Community as part of any project level development proposals and masterplanning, to determine the sites individual importance for golden plover and lapwing and inform mitigation proposals. A commitment to mitigation and phasing of Tendring Colchester Borders Garden Community is required within the Section 1 Strategic Plan dependent on the findings of bird surveys. In the unlikely but possible event that cumulative numbers of SPA birds affected are likely to exceed thresholds of significance (i.e. >1% of the associated European



Site), appropriate mitigation in the form of habitat creation and management in perpetuity, either on-site or through provision of strategic sites for these species elsewhere, will be required. If required, mitigation will need to create and manage suitably located habitat which maximises feeding productivity for these SPA species, and such mitigatory habitat would need to be provided and fully functional prior to development which would affect significant numbers of SPA birds.' All options have a number of Listed Buildings across the options which should be preserved; the topography of the land indicates benefits to the proposals in the form of integrating development into a natural context. Overall, uncertain impacts are relevant for all options, with additional considerations given to the presence of a SSSI in GCEC3.

North Colchester

Both North Colchester options include large areas of land identified as Grade 2 Agricultural Land, classed as 'very good' by Natural England, with GCNC2 having an additional proportion of Grade 1 'excellent' Agricultural Land. The sites both have issues surrounding Listed Buildings and their settings; however there are not considered to be any insurmountable issues regarding development at either scale. Although ecological assets exist throughout, both sites do not contain any wildlife designations, and so have scope to introduce these within proposals in conformity to Garden City principles. The site's relationship to the town of Colchester to the south is critical to the sites accessibility and sustainability, however maintaining this relationship is likely to ensure that any buffer between the two can only be minimal. This would see the site develop as a potential urban extension with a surrounding belt of countryside to the south being difficult to implement without impacts on settlement form. Natural England's National Character Area Profile: Northern Thames Basin, in which this area lies, additionally indicates that the rural urban fringe should be conserved and enhanced through the spatial planning process. Despite there being little in the way of impacts on site, the potential for negative impacts are significant surrounding any future expansion of the Dedham Vale AONB, the National Character Area to the immediate north of the North Colchester option. It would be unlikely that any mitigation or design requirements would be acceptable if the AONB were to be expanded; a proposal that has been explored and supported in recent years. Overall, the site can be considered to have negative impacts on settlement form as an adjacent community to Colchester, the possibility of the site impacting on the landscape significance of the AONB should it be expanded, and the loss of Grade 1 agricultural land in regard to GCNC2.

Colchester / Braintree Borders

Options GCWC1, GCWC2, GCWC3 and GCWC4 all include land that is identified as Grade 2 Agricultural Land; classed as 'very good' by Natural England. Of these options, GCWC3 can be seen to offer a smaller proportion of development on Grade 2 Agricultural Land, with development expected to occur on Grade 3 (a lesser quality). Options GCWC1, GCWC2 and GCWC4 also contain the Marks Tey Brickpit SSSI, however its location at the north east boundary in each instance ensures that this designation can be protected and enhanced through the requirements of a surrounding belt of countryside to prevent sprawl and other mitigation. Option GCWC3 does not have any implications in this regard, although detailed proposals would have to be sensitive to the presence of Domsey Brook. Options GCWC2 and GCWC4 are in close proximity to a Scheduled Monument (a Roman villa 450m south of Warren's Farm to the north) and could affect the setting of this asset, however the specific impacts of the options, and their significance, would have to be subject to specialist assessment once more detailed masterplanning is forthcoming. Option GCWC1 does not extend as far north west in proximity to the Scheduled Monument as Options GCWC2 and GCWC4 as to warrant the same expected level of potential impact; however the same issues would have to be investigated. Option GCWC3 is assessed as unlikely to impact on this designation. All the options contain a small number of Listed Buildings, in reflection of the size of the proposals, and



although impacts on their setting would have to be further investigated, it is believed that at this strategic level, the scope of all proposals ensures that impacts can be avoided. The landscape implications of the proposals vary commensurate to the scale of each proposal, with GCWC4 expected to have more significant impacts than GCWC1 and GCWC2, with GCWC3 expected to have less impact in comparison to all the other options. Natural England's National Character Area Profile for the South Suffolk and North Essex Claylands, within which the options lie, states that the contrasts within the local landscape character, between the plateau and river valleys should be retained, with an enhancement of the balance between the urban and rural landscapes. This is true of options GCWC1, GCWC2 and GCWC4. It adds that the character of the area's settlements should be maintained in the rural areas and urban encroachment kept to a minimum. For this reason, minor negative impacts are possible commensurate to the scale of options. The Landscape Character Assessment (2006) states that the landscape character of the broad area is not particularly sensitive to change, with limited views associated with medium to large field patterns and mature hedgerows, however the northern part of wide area has implications associated with the Blackwater River Valley Landscape Character Area which is more sensitive to views. The impacts expected from each option are indicative of their scale in each regard, and as such a range of impacts have been highlighted in this appraisal. Nevertheless, it should be noted that at the each options' scale, mitigation can be expected to be possible. The AA concludes that the site will not have any specific impacts related to the loss of off-site impacts on Natura 2000 sites. Overall, uncertain to negative impacts are highlighted across these Garden Community options in response to scale, and possible impacts at this stage on SSSIs and a Scheduled Monument as well as wider landscape implications.

West of Braintree

Options GCWB1 and GCWB2 both include land that is identified as Grade 2 Agricultural Land; classed as 'very good' by Natural England. Both options also include land allocated for minerals development within the adopted Minerals Local Plan (MLP). This land, in the south east portion of both options, is also identified as a flagship restoration scheme; as a result, measures already exist to increase biodiversity on the site. Explored in isolation, there are no perceived incompatibilities of this with the requirement of both GCWB1 and GCWB2 to provide a belt of countryside to prevent urban sprawl. It should be noted that a significant Country Park (Great Notley) exists in close proximity to the south of the broad area and this is identified within the ECC Country Parks hierarchy as a 'destination park' with a significant recreational offer. GCWB2 includes the designation of Bosted Wood, a LoWS and Ancient Woodland whereas GCWB1 extends to its eastern extent. Due to its location, and the requirement of the belt of countryside previously mentioned, the location of Bosted Wood is not considered an insurmountable issue to either option, however it is recommended that measures to conserve and enhance are sought through any eventual masterplanning, particularly for GCWB2. The northern boundary of both options also abuts the Conservation Area of Great Saling which contains a range of listed buildings including grade II as well as the Registered Park and Garden of Saling Grove. In addition, 'Pods Lane' is a designated Protected Lane which, as a heritage asset, would likely need to be integrated into any new Garden Community. It is perceived that impacts are unlikely to be insurmountable and that the preservation or even enhancement of the setting of these heritage assets can be ensured through adherence to Garden City Principles. GCWB2, in regard to its inclusion of the Great Saling airfield may also have archaeological implications, however further detail would be required as to the potential future of the airfield in any forthcoming masterplan. The AA concludes that the site will not have any specific impacts related to the loss of off-site impacts on Natura 2000 sites. Overall, uncertain / negative impacts are highlighted for both options in relation to the presence of the Minerals Allocation on site, however it should additionally be noted that should this be overcome, more positive impacts would be prevalent for both options.



The 'Metro Plan'

Agricultural land in the various broad locations ranges from predominantly good / moderate (grade 3) in Thorpe-le-Soken and Weeley and very good (grade 2) in Great Bentley and Alresford. Landscape sensitivity varies within the locations. Natural England's National Character Area Profile: Northern Thames Basin, in which this area lies, includes that the dispersed settlement character should be retained through careful design and location of new development. It is not certain whether the expansion of numerous existing small settlements in the area would be acceptable within the area. Additionally, the TDC Landscape Character Assessment (2001) states that Thorpe-le-Soken (Clacton and Sokens Clay Plateau LCA) is in an area with a need to conserve low density settlement patterns with the retention of strategic gaps between settlements are important to maintain their individual identities. Weeley (Holland Valley System and Clacton and the Sokens Clay Plateau Landscape Character Areas) additionally has protection recommendations in the assessment stating that high density or mass produced housing designs would not be appropriate and that limited building should only be accommodated with care in siting and design. Great Bentley falls within the St Osyth Great Bentley Heaths and the Alresford Valley System Landscape Character Areas, where high density or mass produced housing designs would not be appropriate, and with plateau edges that are particularly sensitive to development due to any built development being highly visible in this large scale open landscape. Alresford is within the Bromley Heaths Landscape Character Area, which has a large scale open landscape with any new development being highly visible over long distances. The Landscape Character Assessment (2001) adds that within this area, the identity of individual villages should be maintained due to the ancient rural settlement pattern. The scale of development at each broad area is in each instance unlikely to be able to factor in effective landscape and design requirements without diminishing developable areas. The area in and around the Thorpe-le-Soken and Weeley proposed locations have a mosaic of habitats including ancient woodland, (the nationally recognised and protected Weelyhall Wood SSSI), and a number of Local Wildlife Sites (LoWS). Although Alresford is predominantly absent of ecological designation, the Great Bentley broad area also contains a number of LoWS. Although not considered within the scope of the HRA due to it not being a preferred option, the AA indicates that all sites within this option are within the Essex Estuaries SAC and Colne Estuary SPA / Ramsar zones of influence (as evidenced by the fact that this is the case for Tendring / Colchester Borders Garden Community options), and further suggests that there could be issues with the loss of off-site habitats. The mitigation requirements of the Tendring / Colchester Borders can be expected to apply to this option also, however it is considered that any creation of offsetting habitats would be comparatively more difficult to integrate. It is felt that at the scale likely to be required, the developable areas of each growth location would be significantly diminished to accommodate the requisite land to reduce such pressures. Regarding the historic environment, the Thorpe-le-Soken area contains Thorpe Hall, a Grade II listed park and garden which dominates the north-eastern part of the broad location. Additionally, there are several Grade II listed buildings proximate to the area, as is also the case within the Weeley, Alresford and Great Bentley broad locations. Additionally in Great Bentley there is a Grade I listed Church along Plough Road, the setting of which would be difficult to preserve through development of the scale intended. Overall, the dispersed model of growth within numerous settlements will all create negative impacts singularly. The scale of development in each instance ensures that effective mitigation and enhancement is unlikely to be provided on site. For this reason, significant negative impacts are highlighted.

Monks Wood

Natural England's National Character Area Profile for the South Suffolk and North Essex Claylands, within which the options lie, states that the contrasts within the local



landscape character between the plateau and river valleys should be retained, with an enhancement of the balance between the urban and rural landscapes. It adds that the character of the area's settlements should be maintained in the rural areas and urban encroachment kept to a minimum. There can be considered to be a negative impact in the broad area in accompaniment with the site being additionally located within the Blackwater River Valley Landscape Character Area, as identified in the Landscape Character Assessment (2006). The skyline of the valley slopes in this area is visually sensitive, with potential new development being visible to and from adjacent Landscape Character Areas and also within views across and along the valley. There is also a sense of historic integrity, resulting from historic settlements and a dispersed settlement pattern. The quality of agricultural land is predominantly very good (Grade 2). The area around the proposed site includes a mosaic of habitats including ancient woodland, arable fields, semi-improved grassland and the River Blackwater. There are a number of Local Wildlife Sites (LoWS) both in and around the proposed site, largely designated for woodland habitat. Despite this, the scale of the proposal is such that the LoWS can be retained within an effective and suitable proposal, in line with Garden City Principles, with the addition of green linkages between them and to existing habitats located on the periphery of the site. The AA concludes that the site will not have any specific impacts related to the loss of off-site impacts on Natura 2000 sites. Regarding the historic environment, the study area contains 24 Listed Buildings (I, II and II*) within or on the immediate periphery of the site area. The setting of these buildings should be of key consideration with any new development, particularly the open setting which they currently enjoy. There are several areas on the site (including the whole north-western corner adjacent to Pattiswick, the areas around Gatehouse Farmhouse and Vineyard Cottage, and the areas adjacent to Monkswood House and Monkswood Cottage, and adjacent to The Old Rectory and Cradle House) which would be considered to have a significant adverse effect which would be difficult to mitigate (BDC Heritage Impact Assessment 2016); ensuring that that the site would be generally unsuitable to be developed in this area. It can be considered however that the protection of these assets could be possible in line with Garden City Principles. An archaeological assessment of the site (BDC Heritage Impact Assessment 2016) identifies that the site contains surviving historic landscape features, some of which may be medieval in origin. There is potential for prehistoric and later archaeological remains to survive and possible Roman settlement and ritual activity which would be of regional significance. This would have to be subject to further detailed assessment should the proposal be progressed. Overall, the option has been assessed as having uncertain to negative impacts associated predominantly with the landscape implications within this area the Blackwater river valley, and also regarding local wildlife sites and the significance of the historic environment. It is possible that these could be factored into any successful scheme however, and that landscape issues can be minimised through exemplar design requirements.



3. Environment / Amenity – Acceptable relationship with and impact on occupiers of existing properties and neighbouring areas/towns (maintaining adequate separation)	Tendring / Colchester Borders			North Colchester		Colchester / Braintree Borders				West of Braintree		Metro Plan	Monks Wood
	GCEC1	GCEC2	GCEC3	GCNC1	GCNC2	GCWC1	GCWC2	GCWC3	GCWC4	GCWB1	GCWB2	GCMP1	GCMW 1
Preferred Options Stage	++	++	+	-	-	?	?	?	++	++	+	N/A	N/A
Draft Publication Stage	+	+	?/+	?/-	?/-	?/-	?/-	?/-	?/-	?/-	?/-	--	?/-

Headline Impacts:

Tendring / Colchester Borders

Options GCEC1 and GCEC2 will have positive impacts associated with the topography of the area constraining views into and across the sites, which are assessed as reducing the visual impacts of any Garden Community. The existing Local Nature Reserves of Salary Brook and Welsh Wood create the basis of an established and high quality buffer between Colchester and any new Garden Communities to the west, and there are no other existing settlements to the east that would be affected by any of the options at their stated scales. Option GCEC3 has additional considerations to take into account regarding the A137 Harwich Road which bisects the area around Fox Street. Maintaining a clear separation of this settlement may fragment the wider development, in particular that area to the north of the railway line. For that reason, impacts are not highlighted as positively for this option.

North Colchester

Options GCNC1 and GCNC2 have slightly differing impacts, associated with the impact on the existing settlements of Langham to the north (in regard to GCNC1) and also to the linear development to the west (in regard to GCNC2). In consideration of the location and size of the Solar Farm existing at Boxted Airfield, it is uncertain to what extent option GCNC1 could adequately ensure a degree of separation with Langham whilst simultaneously ensuring that wider Garden City Principles are met, where the extent of land available for housing and employment delivery is uncertain at this current time and over the plan period. It is understood that the promoter of the site for development could remove the solar farm upon expiry of its consent, with the land then developed for housing; however in the interests of sustainability, the removal of a renewable energy facility could not be considered positive. Option GCNC2 does not have such significant considerations, however, extends further west.



Colchester / Braintree Borders

Regarding options GCWC1, GCWC2, GCWC3 and GCWC4 there will be varying different implications associated with settlement coalescence; these are largely commensurate to the different scales of the proposals. It should be noted however that coalescence can be prevented in all options with similarly varying degrees of countryside acting as a buffer; a surrounding belt of such being a Garden City Principle to which all options can fully meet. Impacts on the residential amenity of the settlements of Marks Tey and Little Tey however are not as positive with options GCWC1, GCWC2 and GCWC4 possibly assimilating the aforementioned settlements into the Garden Community. A buffer separation will likely be needed to be developed through masterplanning to minimise certain impacts on existing communities, and it could be considered that the scope for this would be maximised through the larger option GCWC4 with enough available land to have limited knock on effects regarding adhering to other Garden City Principles. Option GCWC3 has been assessed as not having these specific considerations in addition to its required countryside belt protecting any properties to the south. Overall however, the presence of multiple existing settlements within the broad area lead to uncertain to negative impacts being highlighted.

West of Braintree

There are limited numbers of existing residential properties in the area of both options GCWB1 and GCWB2, however the small settlement of Blake End exists to the south west of the site and is located adjacent to a junction corresponding to possible access to the broad area from the B1256. It should be noted that assimilation of Blake End is not assumed, in so far as a required belt of surrounding countryside would act as a buffer, however there may be transport implications and perceived loss of amenity in that regard. To the north, both options extend towards Great Saling, however as previously mentioned this would be buffered with countryside to prevent sprawl, and a Registered Park and Garden exists at the boundary extent; the preservation of the setting of which is likely to ensure that the new Garden Community does not negatively impact residents of the existing settlement further to the north. Specifically in relation to GCWB2, additional considerations would be to the amenity of residents in Stebbing Green and a desire to ensure separation. In isolation this is not considered an insurmountable issue however the presence of Boxted Wood within the area to the immediate east of any required buffer, could limit the suitability of this eastern part of the option. Uncertain to negative impacts are highlighted in this re-assessment in line with a comparable assessment of all Garden Community options.

The 'Metro Plan'

The Metro Plan option adopts a different approach than the other Garden Community options, in so far as it represents a series of expanded settlements at Thorpe-le-Soken, Weeley, Great Bentley and Alresford. To that extent, the impacts on this sustainability objective / Garden City Principle are significantly negative; a focus on the aforementioned settlements' rail stations represents new development that permeates into the existing settlements, significantly increasing their size. The distances between the settlements are relatively short, and strategic gaps will be diminished, with likely negative cumulative impacts associated with landscape holistically and in consideration of the importance of wider historic settlement patterns. The option is therefore unlikely to meet the sustainability objective criteria 'Garden City principle without significant negative impacts.



Monks Wood

The area is in a valley (associated with the river Blackwater), with the valley slopes being visually sensitive, particularly to new development at the scale proposed; this would be visible across and along the valley. There is also a sense of historic integrity, resulting from historic settlements and a dispersed settlement pattern. At present, the site boundary lies within 400m of the built form of Coggeshall at its closest point, however a surrounding belt of countryside, as required of Garden City Principles would ensure impacts can be suitably mitigated. Further to the west, the site boundary extends to that of Pattiswick. In view of this, it can be considered that the proposed site would lead to coalescence with Pattiswick (including the possible subsuming of the dispersed settlement) however at the scale proposed, the Garden Community option can be considered able to ensure adequate separation is factored into the wider scheme whilst simultaneously ensuring that impacts on the rural and historic character of existing settlements in the broad area is minimised. Uncertain / negative impacts are highlighted in response to this, however it should be noted that a smaller scale option at this location that addresses issues of coalescence and reflects historic settlement patterns would benefit from an increased likelihood of mitigation measures being possible.

4. Transport – Incorporation of integrated and accessible sustainable transport systems, with walking, cycling and public transport designed to be the most attractive forms of local transport	Tendring / Colchester Borders			North Colchester		Colchester / Braintree Borders				West of Braintree		Metro Plan	Monks Wood
	GCEC1	GCEC2	GCEC3	GCNC1	GCNC2	GCWC1	GCWC2	GCWC3	GCWC4	GCWB1	GCWB2	GCMP1	GCMW1
Preferred Options Stage	+	+	?	?	?	+	+	+	?	?	?	N/A	N/A
Draft Publication Stage	+	+	+	?/-	?/-	?	?	?	?/-	?/-	?/-	+	-

Headline Impacts:

Tendring / Colchester Borders

For Tendring / Colchester Borders options, the presence of the Great Eastern Mainline and rail links at Hythe exist as a rapid public transport link to Colchester; it would be likely however that additional new infrastructure would be needed, possibly at the University in the south or towards the A120 in the north, with interconnecting public transport links integrated into all parts of both sites. The existing strategic and local bus networks currently set down and pick-up in close proximity to both sites with a bus interchange located



at the University campus. Within the Colchester Borough Council Local Plan, provision is made for a dedicated bus corridor to support development in North Colchester; anticipated to be delivered on the back of the redevelopment of the former Severalls Hospital. Consultants Jacobs have been instructed by ECC to develop options for a rapid transit system linking the site, University and town centre. A Bus Rapid Transit (BRT) would appear a sustainable option in light of other public transport links, utilising a number of possible routes into Colchester town centre and possibly to the Hythe rail station. Option GCEC3 had previously (at the Preferred Options stage) been assessed as only partially meeting the criteria of the sustainability objective / Garden City principle due to the spatial size of the site, however it is now considered more possible that a further level of site wide connectivity will be required in view of the deliverable area of the option not necessarily being any significantly different under this option, with elements of the larger site benefitting from existing public transport infrastructure. The extent of existing public transport infrastructure in and around the site, as well as the site's relatively close proximity to Colchester town, ensure that positive impacts are highlighted in this assessment.

North Colchester

It should be noted that options GCNC1 and GCNC2 do not benefit from an existing rail link. It can be considered that only bus, walking and cycling opportunities appear suitable, and the options could seek to benefit from links to the existing Park and Ride scheme a kilometre from the broad location to the west and strategic road links to the east and south. The options both have a reliance on the road network for public and private transport movements. Should bridging of the A12 be possible, or existing bridges be upgraded, then access to wider public transport initiatives could be present to the Northern Gateway. Despite this however, links to the A12 and the strategic road network are likely to prove private car use attractive and it is uncertain whether there will be any benefits to the town centre through bus links only given the proximity and ease of access to out of town centres. A re-assessment of the North Colchester options at this stage highlight uncertain / negative impacts in light of the absence of existing rail links and the possibility of traffic movements being private. It is considered that this reflects a more accurate assessment of the options in light of other options (and for the benefit of differentiating between them for comparison purposes) and also those assumptions made as a result of the findings of the North Essex Garden Communities Movement and Access Study evidence base document.

Colchester / Braintree Borders

The Colchester / Braintree Borders options all benefit from the presence of the Great Eastern Mainline running through the site, and also the existing rail station at Marks Tey. In addition, the infrastructure commitments regarding the A12 are likely to prove increased bus links suitable and viable options. Despite this, there is a possibility that these infrastructure improvements would warrant sustainable transport means less attractive in favour of private car journeys and issues of severance exist regarding the A12 and the current route of the A120 ensure that walking and cycling infrastructure through the larger site options could prove difficult to integrate. Work will however be required to adequately ensure the interconnectivity of the whole site by sustainable means. The Marks Tey / Little Tey area is already connected by public transport - both bus and rail (Marks Tey rail station) to Colchester, Braintree and other centres, including London. This is an advantage for developing a sustainable transport system for any Garden Community option. The A120 re-routing options, currently out on consultation at the time of writing, may similarly offer enhanced bus services through the site to key centres. There is a need for a public transport network to be high frequency, connecting key nodes, including the railway station, and creating the conditions to achieve greater modal shift away from the car for local and longer distance trips. Specifically for option GCWC4, the scale of the option might lead to the existing Marks Tey rail station to be constrained, and



an additional station more centrally within the site might need to be explored that operates similar to a branch line to the existing station. This leads to general uncertain / negative impacts. As such, impacts are likely to be less positive in line with scale of required improvements. Overall, the possibilities of integrating high quality sustainable transport options exist uniquely at the broad area, however the requirements for new infrastructure are considered of a scale that can only give rise to uncertain impacts at this stage.

West of Braintree

Options GCWB1 and GCWB2 have been highlighted as currently having uncertain / negative impacts. Both options do not benefit from an existing rail link and in addition links to the A120 and the strategic road network are likely to prove private car use attractive. It is therefore more uncertain whether there will be any benefits to the town centre through bus links only given the proximity and ease of access to Chelmsford and out of town centres such as Freeport. Connecting the options with the Flichway could however provide direct links with Braintree and Braintree Railway Station. The establishment of links south of Flichway would connect Skyline 120 for employment and Great Notley Country Park for leisure / recreational activity. Regarding public transport, the direct access of the site to the A120 can be considered advantageous in terms of connecting the site with North Essex inter-urban bus routes, providing connectivity with Stansted Airport and employment centres and the existing settlement. The opportunity to achieve a development of significant scale with population critical mass may rely on a system with greater connectivity and speed such as a form of rapid transit network. Without this inter-urban/ inter-regional public transport system, the risk exists that the majority of journeys external and internal to the site would likely be car based in this area..

The 'Metro Plan'

The Colchester Metro Town proposal is based on the notion of expanding settlements that benefit from an existing railway station, providing direct connectivity to the employment and centres of Colchester and Clacton-on-Sea. In this context, this proposal theoretically responds to the Garden Communities principle of transit-oriented development. It should be noted however that much of the developable land at each location would be residential, with key services, facilities and employment opportunities being provided at existing centres of Clacton and Colchester. This limits the positivity of impacts, in so far as travelling distances will be larger than for other options. This is also likely to be the case for other retail, leisure and recreational uses. The principle of the option responds to development being focussed within a 10 minute walk at each of the four expanded villages' rail stations. The provision of convenient and safe walking and cycling routes to each station is identified as possible to integrate into each development, offering positive benefits to the proposal. CAUSE also support the development of a tram-train service on the Sunshine Coast line with opportunities to link different sites with Colchester at a greater frequency and allowing street running trains to serve Colchester town centre for greater public transport integration. Despite this however, it is likely to be more challenging to achieve such a system as well as a fully integrated and sustainable transport network in line with offering bus links, particularly in relation to existing and new services. It should be noted that none of the villages, and specifically their railway stations, benefit from being in close proximity to A-roads, with access dependent on rural roads only. This may impact on the ability to fully integrate these settlements with other public transport infrastructure / methods, which is likely to be required to compliment the rail service. The option has however been assessed as having positive impacts in line with focussing development within a 10 minute walk of existing rail links, considerations regarding the current (existing) capacity of the rail service along the Sunshine Coast, and the fact that a comparably lower level of infrastructure would be required.

Monks Wood



The absence of an existing rail station to serve the development option hinders the ability of the proposal to improve sustainable movements to main employment areas and in response to a need to reduce the need for private car use. The closest rail station is at Kelvedon, over 5km away to the southeast, which would be unsuitable to rely upon due to the access implications of this station through the villages of Feering and Kelvedon and its current use as the principal station serving settlements within a wide geographic area. It is felt that, in light of these considerations, it would be unsustainable for Kelvedon to additionally act as the principal rail station to serve the needs of any new Garden Community at Monks Wood. This is notwithstanding the public transport aspirations of Garden City principles, which require a significant modal shift from private car use. It is possible that the A120 re-routing scheme, should a relevant option be taken forward that supports growth at Monks Wood, would increase access to Braintree Freeport Station approximately 8km to the west of the site, however significant attractive public transport infrastructure solutions would need to be developed to support public transport links to this location from the Monks Wood proposal. It should also be noted that existing Braintree stations are located on a branch line, with questions regarding whether the existing frequency of services would be suitable for the additional influx of passengers from the Monks Wood proposal in addition to identified growth at Braintree. Marks-Tey station is located approximately 10km to the east of the site, however any integrated public transport links to this station would likely only be feasible should the Colchester / Braintree Borders Garden Community option (principally the public transport solutions that would be viable at this Garden Community) be additionally taken forward; the cumulative impacts of these two Garden Community locations would give rise to significant negative impacts on a range of sustainability criteria in the broader area. The broad Monks Wood area is served by several strategic bus routes operating on the A120 between Ipswich and Stansted, Stansted and Colchester, Colchester and Chelmsford and Witham to Harwich; however these bus services currently stop over 1km from the proposal site and are infrequent. It is considered that public transport options are limited to bus services in this location, which are heavily dependent on the preferred A120 re-routing scheme once identified and commitments made. This considered, at present the proposal is unlikely to meet the sustainability objective criteria / Garden City Principle without significant negative impacts on existing local rail stations; however once the preferred A120 re-routing scheme is known the ability to make more informed judgements regarding overall and alternative public transport options / solutions can be made. Overall, minor negative impacts are highlighted for comparison purposes with other options.

5. Resilience - Positive contribution towards maintaining resilient town centres and identified regeneration and development priority areas and institutions (including Essex University)	Tendring / Colchester Borders			North Colchester		Colchester / Braintree Borders				West of Braintree		Metro Plan	Monks Wood
	GCEC1	GCEC2	GCEC3	GCNC1	GCNC2	GCWC1	GCWC2	GCWC3	GCWC4	GCWB1	GCWB2	GCMP1	GCMW1
Preferred Options Stage	++	++	++	+	+	+	+	+	?	?	?	N/A	N/A
Draft Publication Stage	++	++	++	+	+	?/+	?/+	?/+	?	?/+	?/+	++	?/-

Headline Impacts:

Tendring / Colchester Borders

Options GCEC1, GCEC2 and GCEC3 have all been assessed as making a significantly positive impact on the town centre of Colchester, due largely to the options' proximity to the town centre of Colchester, the University of Essex and identified regeneration areas in east Colchester. Access to the town centre railway station, from the Hythe station at present and via other public transport, ensures that direct access to the town centre and regeneration areas in the east of the town centre has the potential to be maximised in a sustainable manner. The requirements of the Garden Community to provide services, convenience retail and leisure facilities may lead to some degree of diversion to the town centre; however the proximity of the location to the town centre will likely ensure resilience is maintained and enhanced.

North Colchester

Options GCNC1 and GCNC2 will have positive impacts associated with distances to the town centre, existing vehicular access and also existing access to park and ride services into the town centre. Impacts are not as significant as Tendring / Colchester Borders options due to the lack of rail links and the presence of the Northern Gateway including proposals for this area, which combined with the emergence of an expected district or neighbourhood centre at any Garden Community itself could cumulatively reduce the need for residents to access the town centre for services, convenience retail and leisure facilities. The broad location's accessibility to the strategic road network may divert trips away from the town centre to other out of centre locations.



Colchester / Braintree Borders

Options GCWC1, GCWC2 and GCWC3 have been assessed as having positive impacts on the town centre of Colchester, and benefit from existing rail links at Marks Tey which can be expected to be expanded in line with any Garden Community option. Impacts are limited however due to the possibility of residents using the facilities of Tollgate in the first instance as preferable and closer to any Garden Community than the town centre of Colchester. Option GCWC4 has been assessed as having uncertain impacts partly for this reason, but also commensurate to its scale. The level of services and facilities required within this Garden Community option itself should reasonably be expected to be of a suitably large scale in order to be sustainable, however may reduce the number of expected journeys into Colchester for services, convenience retail and leisure facilities. Overall there will be uncertain / positive impacts.

West of Braintree

Options GCWB1 and GCWB2 have been assessed as having uncertain / positive impacts on the town of Braintree. Significant positive impacts can reasonably be expected due to its close proximity and easy accessibility; however the lack of direct rail links to the centre and the similarly easy access to the strategic road network could see residents travelling to the larger centre of Chelmsford, or to Freeport; to the south of Braintree but physically detached from the town centre.

The 'Metro Plan'

Options GCEC1, GCEC2 and GCEC3 have all been assessed as making a positive impact on the town centre of Colchester, due to the options' accessibility to the to the centre via existing rail links. There will positive impacts associated with proximity and ease of access to the University of Essex. Similarly, there will also be some level of positive impacts associated with proximity and sustainable access to Clacton and associated regeneration areas. The requirements for each location to incorporate some level or convenience retail offer, leisure and recreation have been assessed as not being harmful to the centres of Clacton and Colchester commensurate to the scale of growth at each location within the Metro Plan proposal.

Monks Wood

This option has been assessed as having uncertain / negative impacts on the town of Braintree and Colchester due largely to the current lack of rail links and the expected reliance on private car journeys that may divert trips from centres to out-of-centre retail and leisure offers at Braintree Freeport and Tollgate. Much will depend on the A120 re-routing in regard to future accessibility however the proposal's general location is such that the use of any services, convenience retail and leisure facilities within the Garden Community option itself would likely be maximised, with notions of self-sustainability.

6. Housing – Provision of a mix of tenures, including affordable homes and a range of housing types (including self-build/custom build and gypsy and traveller pitches).	Tendring / Colchester Borders			North Colchester		Colchester / Braintree Borders				West of Braintree		Metro Plan	Monks Wood
	GCEC1	GCEC2	GCEC3	GCNC1	GCNC2	GCWC1	GCWC2	GCWC3	GCWC4	GCWB1	GCWB2	GCMP1	GCMW 1
Preferred Options Stage	++	++	++	++	++	++	++	++	++	++	++	N/A	N/A
Draft Publication Stage	++	++	++	++	++	++	++	++	++	++	++	--	++

Headline Impacts:

Tendring / Colchester Borders

All of the Tendring / Colchester Borders Garden Community Options can be expected to have significantly positive impacts at this stage, and are all indistinguishable in regard to the opportunities of each option to adhere to relevant Garden City Principles regarding housing supply, type and tenure including gypsy and traveller provision.

North Colchester

All of the North Colchester Garden Community Options can be expected to have significantly positive impacts at this stage, and are all indistinguishable in regard to the opportunities of each option to adhere to relevant Garden City Principles regarding housing supply, type and tenure including gypsy and traveller provision.

Colchester / Braintree Borders

All of the Colchester / Braintree Borders Garden Community Options can be expected to have significantly positive impacts at this stage, and are all indistinguishable in regard to the opportunities of each option to adhere to relevant Garden City Principles regarding housing supply, type and tenure including gypsy and traveller provision.

West of Braintree

All of the West of Braintree Garden Community Options can be expected to have significantly positive impacts at this stage, and are all indistinguishable in regard to the opportunities of each option to adhere to relevant Garden City Principles regarding housing supply, type and tenure including gypsy and traveller provision.

The 'Metro Plan'



The CAUSE submission indicates that the Metro Plan option could deliver between 6,000-8,000 homes. The submission highlights those developable / deliverable areas as those that were submitted as part of the Tendring District Council Local Plan call-for-sites process. Work undertaken to explore the suitability and feasibility of the Metro Plan option (Colchester Metro Town – Evaluation of Alternatives, 2017 (AECOM)) identifies that the current land ‘availability’ as identified through the call-for-sites submissions would only provide less than 3,000 dwellings at a density of 35 dwellings per hectare. This is in consideration of the requirements to make sustainable places, following Garden Community principles, integrating numerous other non-residential development opportunities for the purposes of creating sustainable communities. It can be concluded that a larger amount of individual parcels of land need to be identified. The Metro Plan submission indicates that some level of growth would be required at other Garden Community option locations with the same principle of focussing development within a 10 minute walkable distance radius from existing train stations; namely at the Tendring / Colchester Borders and the Colchester / Braintree Borders. Whereas this principle does seek to address the housing shortfall of the Thorpe-le-Soken to Alresford model of satellite settlements, it should be noted that across all of these locations land was not submitted for consideration with this intention. These individual development proposals should be explored within the context of what represent the most sustainable options at those individual scales. This falls within the remit of the respective ‘Section Two’ Local plans of Braintree, Colchester and Tendring Councils. For this reason, the Metro Plan option has been assessed as being unlikely to meet the criteria of this sustainability objective / Garden City principle without significant negative impacts on the ability of meeting objectively assessed housing needs across the North Essex Authorities area at this stage.

Monks Wood

The Monks Wood Garden Community Option can be expected to have significantly positive impacts at this stage, and are all indistinguishable in regard to the opportunities of each option to adhere to relevant Garden City Principles regarding housing supply, type and tenure including gypsy and traveller provision.



7. Employment Opportunities – Provision for a wide range of local jobs within easy commuting distance from homes	Tendring / Colchester Borders			North Colchester		Colchester / Braintree Borders				West of Braintree		Metro Plan	Monks Wood
	GCEC1	GCEC2	GCEC3	GCNC1	GCNC2	GCWC1	GCWC2	GCWC3	GCWC4	GCWB1	GCWB2	GCMP1	GCMW 1
Preferred Options Stage	++	++	++	++	++	++	++	++	++	++	++	N/A	N/A
Draft Publication Stage	++	++	++	+	+	+	+	+	+	+/+	+/+	?	+

Headline Impacts:

Tendring / Colchester Borders

Consistent with the Garden City principle that there should be a variety of employment opportunities within easy commuting distance of homes, a target of creating one new job for each new home should be set. Strategically, and in line with 'Section Two' employment requirements across the three authorities, provision in each Garden Community must complement rather than displace the economic and employment growth ambitions associated with nearby towns. The North Essex Garden Communities Employment & Demographic Studies (SQW / Cambridge Econometrics 2017) states that, 'All three NEGCs are likely to be associated with significant jobs growth, albeit of varying forms. The presumption is that jobs linked to exogenous growth processes will be physically on site (and appropriate provision will need to be made for them). Those linked to homeworking will be physically associated with the homes of residents and therefore also on site; in relation to these jobs, the design of housing will be crucially important. Those related to the consumption of local services may or may not be on site, but all will be reasonably "local"; provision in relation to this component will need to be planned so as to complement, rather than displace, existing local service provision (e.g. in the town of Braintree). In terms of the Garden City principle aspiration of 'one job per house', all three NEGCs appear to be "within range". Broadly, Tendring / Colchester Borders does best – which is plausible, given its proximity to a growing and ambitious university, and the role universities can play in driving high value economic growth. West of Braintree has the most challenging profile – which again is plausible, given the wider economic dynamics of the sub-area of which it is a part, and its specific locational attributes.' All of the options can be expected to have broadly the same level of impact at this stage, and are all similar in regard to the opportunities of each option to adhere to relevant Garden City Principles regarding a full range employment opportunities within the Garden Community itself or within easy commuting distance of homes. Regarding this latter consideration, the proximity of existing, and suitable integration, of public transport opportunities is explored in the assessment of options against sustainability objective 4. In line with the findings of specific evidence being available to inform the SA (the Employment and Demographics Study).



North Colchester

The North Essex Garden Communities Employment & Demographic Studies (SQW / Cambridge Econometrics 2017) identified two 'economic areas' for modelling purposes. It can be assumed that the North Colchester options would fall within 'The Central East of North Essex economic area', recognising the close links between the area and Colchester itself which was used as the spatial unit within which scenarios have been quantified. The Central East of North Essex economic area is primarily focused on Colchester as the primary regional centre, with connectivity to Chelmsford and London (and northwards to East Anglia) via the A12 and GEM. Although certain elements of the Study are not relevant to the North Colchester study area, general positive impacts can be assumed related to the town of Colchester's expansion. There will be limited impacts however associated with the University and associated high value economic growth. For this reason, the options are highlighted as having a reasonable prospect of fully meeting the criteria of this sustainability objective / Garden City principle.

Colchester / Braintree Borders

Consistent with the Garden City principle that there should be a variety of employment opportunities within easy commuting distance of homes, the local authorities have set a target of creating one new job for each new home. Strategically, and in line with 'Section Two' employment requirements across the three authorities, provision in each Garden Community must complement rather than displace the economic and employment growth ambitions associated with nearby towns. The North Essex Garden Communities Employment & Demographic Studies (SQW / Cambridge Econometrics 2017) states that, 'All three NEGCs are likely to be associated with significant jobs growth, albeit of varying forms. The presumption is that jobs linked to exogenous growth processes will be physically on site (and appropriate provision will need to be made for them). Those linked to homeworking will be physically associated with the homes of residents and therefore also on site; in relation to these jobs, the design of housing will be crucially important. Those related to the consumption of local services may or may not be on site, but all will be reasonably "local"; provision in relation to this component will need to be planned so as to complement, rather than displace, existing local service provision (e.g. in the town of Braintree). In terms of the Garden City principle aspiration of 'one job per house', all three NEGCs appear to be "within range". Broadly, Tendring Colchester Borders does best – which is plausible, given its proximity to a growing and ambitious university, and the role universities can play in driving high value economic growth. West of Braintree has the most challenging profile – which again is plausible, given the wider economic dynamics of the sub-area of which it is a part, and its specific locational attributes.' All of the options can be expected to have broadly the same level of impact at this stage, and are all similar in regard to the opportunities of each option to adhere to relevant Garden City Principles regarding a full range employment opportunities within the Garden Community itself or within easy commuting distance of homes. Regarding this latter consideration, the proximity of existing, and suitable integration, of public transport opportunities is explored in the assessment of options against sustainability objective 4. In line with specific evidence being available to inform the SA (the Employment and Demographics Study), all options in the Colchester / Braintree Borders have been re-assessed as having positive impacts.

West of Braintree

Consistent with the Garden City principle that there should be a variety of employment opportunities within easy commuting distance of homes, the local authorities have set a target of creating one new job for each new home. Strategically, and in line with 'Section Two' employment requirements across the three authorities, provision in each Garden



Community must complement rather than displace the economic and employment growth ambitions associated with nearby towns. The North Essex Garden Communities Employment & Demographic Studies (SQW / Cambridge Econometrics 2017) states that, 'All three NEGCs are likely to be associated with significant jobs growth, albeit of varying forms. The presumption is that jobs linked to exogenous growth processes will be physically on site (and appropriate provision will need to be made for them). Those linked to homeworking will be physically associated with the homes of residents and therefore also on site; in relation to these jobs, the design of housing will be crucially important. Those related to the consumption of local services may or may not be on site, but all will be reasonably "local"; provision in relation to this component will need to be planned so as to complement, rather than displace, existing local service provision (e.g. in the town of Braintree). In terms of the Garden City principle aspiration of 'one job per house', all three NEGCs appear to be "within range". Broadly, Tendring Colchester Borders does best – which is plausible, given its proximity to a growing and ambitious university, and the role universities can play in driving high value economic growth. West of Braintree has the most challenging profile – which again is plausible, given the wider economic dynamics of the sub-area of which it is a part, and its specific locational attributes.' All of the Garden Community Options can be expected to have broadly the same level of impact at this stage, and are all similar in regard to the opportunities of each option to adhere to relevant Garden City Principles regarding a full range employment opportunities within the Garden Community itself or within easy commuting distance of homes. Regarding this latter consideration, the proximity of existing, and suitable integration, of public transport opportunities is explored in the assessment of options against sustainability objective 4. In line with specific evidence being available to inform the SA (the Employment and Demographics Study), all options in the West of Braintree have been re-assessed as having uncertain / positive impacts.

The 'Metro Plan'

The North Essex Garden Communities Employment & Demographic Studies (SQW / Cambridge Econometrics 2017) identified two 'economic areas' for modelling purposes. It can be assumed that the settlement of Alresford within the Metro Plan option would fall within 'The Central East of North Essex economic area' in its western location of Alresford, associated with close links to the University and associated high value economic growth. Despite this, the North Essex Garden Communities Employment & Demographic Studies (SQW / Cambridge Econometrics 2017) identifies relatively weak trend-based employment growth associated with Tendring. The CAUSE submission identifies a principle that the Colchester-Colclacton corridor can function as a sub-regional economic and cultural entity, with complementary assets and resources that will promote growth. This acknowledges that the option would benefit from economic development opportunities presented by the Tendring / Colchester Borders Garden Community option with additional employment growth in Clacton. Whilst this is a reasonable proposition for exploration, it can also be assumed at this strategic level that the Metro Plan would have to increase its identified housing supply in order to offset a loss of residential land at the Tendring / Colchester Borders Garden Community option to accommodate the additional required employment floorspace of the Metro Plan. The option can be viewed as not representative of employment needs across the wider North Essex Authorities area, with the Metro Plan existing as a series of predominantly residential schemes that rely on out-commuting; this can also be seen as not representative of Garden City Principles. For this reason, and reflective of the level of uncertainty surrounding the option in regard to employment provision, the option is highlighted as having uncertain impacts.

Monks Wood

The closest main urban centres, providing a variety of established services, existing businesses and employment opportunities, are Braintree (and Braintree Freeport) approximately 5km west, and Colchester approximately 13km east. In addition a linear pattern of retail, leisure and other business types, including formal business parks

(Tollgate Business Park and Westside Centre), is found between Marks Tey and Stanway, within 10km of the Monks Wood site area. The North Essex Garden Communities Employment & Demographic Studies (SQW / Cambridge Econometrics 2017) identified two 'economic areas' for modelling purposes. It can be assumed that the Monks Wood option would fall largely centrally between the 'Central East of North Essex economic area', and the 'West of North Essex economic area' recognising the close links between the area and Colchester and Braintree to a lesser extent. It should be noted however that connectivity to Chelmsford and London (and northwards to East Anglia) via the GEML is not forthcoming at this site and although existing rail stations are not significantly distanced to the broad area, the impacts on the settlements that these rail links exist can be considered to be negative at the scale of growth expected at Monks Wood. In addition, without its own railway station, the Monks Wood site would require other forms of connecting public transport to create sustainable first leg journeys. Although large elements of the Study are not relevant to the Monks Wood proposal area, general positive impacts can be assumed related to the town of Colchester's expansion as well as reasonable connections to Stansted. The site has strategic connectivity, although much depends on the preferred A120 re-routing option which could significantly impact on the broad area's suitability as an employment location. Similarly, as a new employment location Monks Wood would face competition from both Braintree and Colchester, together with Witham and Chelmsford, with the latter especially relevant with respect to office based employment. This differs from the preferred Garden Community options which are better placed to utilise and capitalise on existing employment opportunities more locally and in closer proximity. Despite this, the overall conclusion of this high level assessment is that the option has a reasonable prospect of fully meeting the criteria of this sustainability objective / Garden City principle.

8. Mixed-use Opportunities – Inclusion of cultural, recreational and shopping facilities in walkable, vibrant, sociable neighbourhoods.	Tendring / Colchester Borders			North Colchester		Colchester / Braintree Borders				West of Braintree		Metro Plan	Monks Wood
	GCEC1	GCEC2	GCEC3	GCNC1	GCNC2	GCWC1	GCWC2	GCWC3	GCWC4	GCWB1	GCWB2	GCMP1	GCMW 1
Preferred Options Stage	++	++	++	++	++	++	++	++	++	++	++	N/A	N/A
Draft Publication Stage	++	++	++	++	++	++	++	++	++	++	++	?	++

Headline Impacts:

Tendring / Colchester Borders

All of the Garden Community Options at the Tendring / Colchester Borders can be expected to have significant wider benefits at this stage, and are all indistinguishable in regard to the opportunities of each option to adhere to relevant Garden City Principles regarding the inclusion of cultural, recreational and shopping facilities in walkable, vibrant,



sociable neighbourhoods.

North Colchester

All of the Garden Community Options at North Colchester can be expected to have significant wider benefits at this stage, and are all indistinguishable in regard to the opportunities of each option to adhere to relevant Garden City Principles regarding the inclusion of cultural, recreational and shopping facilities in walkable, vibrant, sociable neighbourhoods.

Colchester / Braintree Borders

All of the Garden Community Options at Colchester / Braintree can be expected to have significant wider benefits at this stage, and are all indistinguishable in regard to the opportunities of each option to adhere to relevant Garden City Principles regarding the inclusion of cultural, recreational and shopping facilities in walkable, vibrant, sociable neighbourhoods.

West of Braintree

All of the Garden Community Options at the West of Braintree can be expected to have significant wider benefits at this stage; due their scale are all indistinguishable in regard to the opportunities of each option to adhere to relevant Garden City Principles regarding the inclusion of cultural, recreational and shopping facilities in walkable, vibrant, sociable neighbourhoods.

The 'Metro Plan'

The Metro Plan option has a reasonable prospect of partly meeting the criteria of this sustainability objective / Garden City principle with general uncertain impacts. The inclusion of cultural, recreational and shopping facilities in walkable, vibrant, sociable neighbourhoods is unlikely to be wholly possible at each location due to the limited scale of development at each individual settlement and within the 10 minute walking radius from each rail station. Although existing infrastructure and services are likely to exist in close proximity to each settlement focus, this is likely to put pressure on existing infrastructure capacities, such as GPs and schools, without the requisite development (dwelling) thresholds being met for the provision of new infrastructure. In Thorpe-le-Soken, dwelling yields would not trigger the requirement for new primary and secondary educational facilities and would put pressure on the existing local primary schools. Crucially also, no primary schools exist within 1km (Institution of Highways and Transportation acceptable maximum walking distance) of the site identified for possible growth. This is similarly the case for Weeley, Great Bentley and Alresford.

Monks Wood

The Garden Community Option of Monks Wood can be expected to have a strong prospect of significant wider benefits at this stage; due the scale of the option, it offers strong opportunities to adhere to relevant Garden City Principles regarding the inclusion of cultural, recreational and shopping facilities in walkable, vibrant, sociable neighbourhoods. It should be added however that new communities would have to travel to Braintree or Colchester for post-16 education.

9. Environmental Quality & Sustainability – Incorporation of generous areas of publicly accessible open space, allotments/food production areas, biodiversity gains, SuDS and zero-carbon/energy-positive technology to ensure climate resilience.	Tendring / Colchester Borders			North Colchester		Colchester / Braintree Borders				West of Braintree		Metro Plan	Monks Wood
	GCEC1	GCEC2	GCEC3	GCNC1	GCNC2	GCWC1	GCWC2	GCWC3	GCWC4	GCWB1	GCWB2	GCMP1	GCMW 1
Preferred Options Stage	++	++	++	++	++	++	++	++	++	++	++	N/A	N/A
Draft Publication Stage	++	++	++	++	++	++	++	++	++	++	++	-	++

Headline Impacts:

Tendring / Colchester Borders

It can be considered that, in specific relation to relevant Garden City Principles, all of the Tendring / Colchester Borders options have a strong prospect of fully meeting the aspirations of this sustainability objective with significant positive impacts. Due to the scale of the proposals, all of the options can adhere to relevant Garden City Principles regarding the incorporation of generous areas of publicly accessible open space, allotments/food production areas, biodiversity gains, SuDS and zero-carbon/energy-positive technology to ensure climate resilience.

North Colchester

It can be considered that, in specific relation to relevant Garden City Principles, all of the North Colchester options have a reasonable prospect of partially meeting the aspirations of this sustainability objective with significant positive impacts. Due to the scale of the options, both options should be able to incorporate some of the requirements regarding generous areas of publicly accessible open space, allotments/food production areas, biodiversity gains, SuDS and zero-carbon/energy-positive technology to ensure climate resilience; however it should be noted that the presence of the solar farm within the boundary of both options would likely ensure that the remaining land would be required for built development purposes and correspondingly unavailable for the land uses required in this sustainability objective.

Colchester / Braintree Borders

It can be considered that, in specific relation to relevant Garden City Principles, all of the Colchester / Braintree Borders options have a strong prospect of fully meeting the



aspirations of this sustainability objective with significant positive impacts. Due to the scale of the options, all of the options can adhere to relevant Garden City Principles regarding the incorporation of generous areas of publicly accessible open space, allotments/food production areas, biodiversity gains, SuDS and zero-carbon/energy-positive technology to ensure climate resilience.

West of Braintree

It can be considered that, in specific relation to relevant Garden City Principles, all of the West Braintree options have a strong prospect of fully meeting the aspirations of this sustainability objective with significant positive impacts. Due to the scale of the options, all of the options can adhere to relevant Garden City Principles regarding the incorporation of generous areas of publicly accessible open space, allotments/food production areas, biodiversity gains, SuDS and zero-carbon/energy-positive technology to ensure climate resilience.

The 'Metro Plan'

The Metro Plan's principle of a series of satellite developments creates notional issues regarding both achieving a fully integrated and connected green grid at the settlement level and also the incorporation of generous areas of publicly accessible open space, allotments/food production areas, biodiversity gains, SuDS and zero-carbon/energy-positive technology to ensure climate resilience. The requirements for open space are likely to be a significant requirement due to the option's focus on Tendring, which as a district contains numerous international / European designated sites in coastal and estuarine areas. It can be expected that the Metro Plan option would require some level of habitat creation as stated in the AA for the Tendring / Colchester Borders Garden Community due to its focus on growth in Tendring district. It is therefore of significant importance that the Metro Plan locations are able to offer such a recreational offer, and the incorporation of SuDS on a case by case basis. It is currently uncertain whether the scale of each location can adequately provide the requirements of this sustainability objective / Garden City principle without significantly diminishing the developable areas of each location. To this extent, the option has been identified as unlikely to meet the criteria of this sustainability objective / Garden City Principle with generally negative impacts.

Monks Wood

It can be considered that, in specific relation to relevant Garden City Principles, the Monks Wood option has a strong prospect of fully meeting the aspirations of this sustainability objective with significant positive impacts. Due to the scale of the options, all of the options can adhere to relevant Garden City Principles regarding the incorporation of generous areas of publicly accessible open space, allotments/food production areas, biodiversity gains, SuDS and zero-carbon/energy-positive technology to ensure climate resilience.



10. Developability / Deliverability - The growth area is available, commercially attractive, and capable of delivering necessary physical / social / green infrastructure and could be viably developed within [6-10] years.	Tendring / Colchester Borders			North Colchester		Colchester / Braintree Borders				West of Braintree		Metro Plan	Monks Wood
	GCEC1	GCEC2	GCEC3	GCNC1	GCNC2	GCWC1	GCWC2	GCWC3	GCWC4	GCWB1	GCWB2	GCMP1	GCMW 1
Preferred Options Stage	++	+	+	?	?	?	?	?	?	+	+	N/A	N/A
Draft Publication Stage	++	+	+	+	?	?	?	?	?	?	?	--	?

Headline Impacts:

Tendring / Colchester Borders

All land in option GCEC1 was put forward for development through the call-for-sites process and that the majority of land is being promoted by a single promoter who has an option to develop the land. With this in mind, it is considered possible that commencement of the development can occur in the emerging plan period to 2033. Options GCEC2 and GCEC3 are assessed as having more uncertainty regarding delivery in the plan period, due to increasing levels of fragmented land ownership associated with larger indicative scales of development; however the principle of these options being able to meet the aspirations of the sustainability objective and related Garden City Principles is not in question.

North Colchester

Option GCNC1 will have a reasonable prospect of meeting the aspiration of the sustainability objective and relevant Garden City Principles. All land in this Option was put forward for development through the Call-for-Sites process, with the majority actively being promoted by a single developer with an option agreement with the landowners to develop. The additional land put forward under option GCNC2 was not included in the Colchester Borough Council Local Plan call-for-sites process, but it is understood that the majority is potentially capable of being brought forward and developed by the same promoter as the land under Option GCNC1. This however would not be all the land under GCNC2, and additional land searches etc. would be required to bring forward GCNC2 in its entirety. There would however be less potential for negative deliverability connotations surrounding the future of the Solar Farm under this option, associated with the larger scale and extent of land..



Colchester / Braintree Borders

Regarding option GCWC1, with the exception of the triangular shaped land located to the north of the A120 and west of Great Tey Road, all land under this option was included within the local plan call-for-sites process and is actively being promoted for development by two main parties. One of these parties is also understood to be able to bring forward the triangular land north of the A120 and west of Great Tey Road if this was identified for the Garden Community. It is believed that development could be commenced within the next 6-10 years, and make use of existing infrastructure to allow development to commence. Despite this, the extent of development will likely be constrained without significant investment. Although the potential exists for option GCWC1 to fully meet the aspirations of the sustainability objective, a 'reasonable prospect' has been highlighted for the purposes of comparison between sites. The same conclusions can be drawn for options GCWC2 and GCWC3, although all land under these options was included within the local plan call-for-sites process. Option GCWC4 will also have similar impacts, with all land included within the Local Plan call-for-sites process with the exception of that located to the north of the existing A120 and west of Great Tey Road. The constraints are also similar, however with the inclusion of possible additional public transport requirements more centrally to the site and the subsequent addition of considerations to the investment decisions of Network Rail. Additionally, much depends on the preferred route option regarding the A120 routing consultation.

West of Braintree

Options GCWB1 and GCWB2 have two-fold considerations that could affect delivery. These are the considerations regarding the mineral quarry, and constraints regarding the needs to invest in utility infrastructure; which consistent with the site's rural location is currently very limited in terms of physical networks and capacity. Option GCWB2 has additionally been highlighted as potentially allowing more flexibility regarding options for providing access from the A120/B1256 into the Garden Community, and commencing development of the new settlement relative to the operation and impact of the proposed quarry.

The 'Metro Plan'

The Metro Plan option has been submitted for consideration with no developer or landowner interest, aside from those parcels of land that lie within each broad location / settlement that were submitted to Tendring District Council as part of their Local Plan call-for-sites process. The desirability of individual landowners to release their land for the garden community is therefore unknown at this time. The degree of landowner fragmentation is also an unknown. These sites can be considered to not correlate well to the notion and principle of the scale of development required at each location to be a genuine Garden Community option, or alternative to strategic level growth. The CAUSE submission states that, 'although the purpose of this report is to examine the issues in principle rather than to prepare a business case it cannot be emphasised too strongly that the Metro concept depends on acceptance of quite large-scale development around the stations.' AECOM concept feasibility work suggests that only 2,777 homes would be forthcoming within the 10-minute walking catchment of the train stations of Thorpe, Weeley, Gt. Bentley and Alresford based on 35dph. Without a large volume of new housing either at the individual settlement level or in aggregate across the four villages, the ability to fund and implement comprehensive and or innovative infrastructure solutions may be more difficult. Because of the rural location of the settlements and their limited scale under this proposal, there may be fewer opportunities to attract private sector development partners, alternative financing or innovative delivery mechanisms, to assist the Councils in achieving their Garden Community ambitions. This may limit the extent of variation in



the types and tenures of the homes provided and who provides them. In this location the market demand is also likely to be less diverse than a location closer to a main urban centre or strategically better connected. The option has been assessed as having significant negative impacts due to the fact that the land is not being actively promoted at this stage.

Monks Wood

The proposal was submitted during the Braintree District Council Preferred Options Local Plan consultation by a single promoter and the land is in single ownership. As greenfield agricultural land with direct access from the existing A120, the proposal indicates that development could be commenced relatively quickly and within 6-10 years, although much depends on the preferred route emanating from the A120 re-routing consultation. The extent of first phase development could be constrained by the need to invest heavily in utility infrastructure, which is consistent with the site's rural location is currently very limited in terms of physical networks and capacity; however for the purposes of a consistent appraisal across all options, impacts are identified as similar to those of other rural locations. Overall, uncertain impacts are highlighted.

Cumulative & Synergistic Impacts of the Allocated Garden Communities

The emerging masterplans for the allocated Garden Communities of Tendring / Colchester Borders, Colchester / Braintree Borders and West of Braintree most closely represent:

- Tendring / Colchester Borders – GCEC3
- Colchester / Braintree Borders – GCWC1
- West of Braintree – GCWB1

The following table summarises the impacts and performance of each allocated Garden Community option, against the sustainability objectives / Garden City principles.

Table 28: The Performance of the Allocated Garden Community (GC) Options

GC Option	Sustainability Objectives (SO)									
	1	2	3	4	5	6	7	8	9	10
GCEC3	?	?/-	?/+	+	++	++	++	++	++	+
GCWC1	?	?/-	?/-	?	?/+	++	+	++	++	?
GCWB1	?/-	?/-	?/-	?/-	?	++	?/+	++	++	?

The cumulative and synergistic impacts of the allocated Garden Community Options have been explored on a 'Sustainability Objective / Garden City Principle' thematic basis. Commentary follows in the following table.

Table 29: The Cumulative & Synergistic Impacts of the Allocated Garden Community (GC) Options

Sustainability Objectives (SO)	Cumulative / Synergistic Impact	Commentary
1. Physical Limitations	No impact	The AA states that, regarding water quality, 'it is concluded that, whilst there are currently issues regarding capacity of water recycling centres in both Colchester Borough and Tendring District, with subsequent risks to European sites associated with changes in water quality, the safeguards which will be included within the Section 2 Local Plans for each, will ensure that a given development will not proceed until the necessary infrastructure upgrades have been provided as necessary in accordance with Anglian Water and Environment Agency advice. Therefore, in conclusion, the measures provided in the Section 2 Local Plans will also provide sufficient certainty that the overall strategic growth proposed in North Essex as part of the Section 1 for Local Plans

Sustainability Objectives (SO)	Cumulative / Synergistic Impact	Commentary
		will not result in significant adverse effects on the Stour and Orwell Estuaries SPA/Ramsar, Colne Estuary SPA/Ramsar, or Essex Estuaries SAC as a result of changes in water quality.' It is not considered that there are any cumulative accessibility issues surrounding the preferred sites, due to their general geographic distribution. Although all Garden Communities are located in close proximity to the strategic road network, they can be considered broadly unrelated at this stage and in light of committed A12 and A120 improvements. There may be some cumulative road traffic and associated air quality issues surrounding any of the Garden Communities with close-proximity non-strategic (in the context of this Local Plan Section One) site allocations in the Councils' respective Section Twos, however it should be acknowledged that the Garden Communities will require / utilise new infrastructure that would not be forthcoming until after the commencement of the majority of non-strategic allocations in the earlier stages of Local Plan periods. It is considered that this is more appropriately addressed in the respective Section Two Sustainability Appraisals, from the viewpoint that non-strategic site allocations are less critical to overall growth in the plan period across the North Essex Authorities area, and also in consideration of different timescales.
2. Impacts	No impact	Cumulative impacts are limited regarding natural and historic environmental features due to the geographic dispersal of the Garden Communities. There will be 'no impact' on biodiversity (SO6) as a result of the findings of the Appropriate Assessment (AA) (2017) of the Section One, regarding recreational pressures associated with the significant increase in growth stated within the Policy. The AA concludes that 'providing that the North Essex Authorities continue to collaborate and prepare the necessary Recreation Avoidance and Mitigation Strategies (RAMS) ... in close consultation with Natural England, and the RAMS are ready for implementation prior to adoption of the Section 1 and Section 2 Local Plans, the Strategic Section 1 Local Plans is not predicted to result in adverse effects on the integrity of the Stour and Orwell Estuaries SPA/Ramsar, Hamford Water SPA/Ramsar, Essex Estuaries SAC, Colne Estuary SPA/Ramsar, or Blackwater Estuary SPA/Ramsar, either alone or in-combination with other plans and projects as a result of recreation.' In addition, the AA indicates that the strategic approach and scope of the Section One (including Garden Communities) enables mitigation to be effectively incorporated.
3. Environment /	No impact	There will be no cumulative impacts associated with the effects on

Sustainability Objectives (SO)	Cumulative / Synergistic Impact	Commentary
Amenity		<p>occupiers of existing properties and neighbouring areas/towns resulting from the Garden Communities due to their geographic distribution. Garden City principles would have to be adhered to in regard to a surrounding belt of countryside to avoid sprawl, and this minimises any perceived coalescence and resulting impact on existing settlements. Cumulatively, no one existing settlement would be negatively affected by any combination of Garden Communities. More holistically, similarly will no single Landscape Character Area be affected by a combination of Garden Communities, of which existing historic settlements form an important part of integrity and sensitivity. It can be considered that, in line with Garden City principles ensuring negative impacts on existing settlements do not occur, that benefits will be realised for existing nearby communities regarding an increase in services and local infrastructure in the wider areas beyond the Garden Communities.</p>
4. Transport	Uncertain impacts	<p>Should each Garden Community be able to integrate effective public transport solutions into the scheme and wider network, then there will be significant positive cumulative impacts resulting from the allocated Garden Communities in response to their individual potential to significantly improve public transport links within the North Essex Authorities area. Positive impacts can also be expected to benefit wider local areas in proximity to the Garden Communities. The geographic spread of the Garden Communities similarly ensures that benefits are widespread across all Districts / Boroughs. The notion of Garden Communities will have positive synergistic impacts regarding health outcomes, with the level of growth required in the North Essex Authorities being provided through developments that require walking, cycling and public transport designed to be the most attractive forms of local transport. Despite this, the Garden Communities at this stage require work, through Garden Community specific DPDs, masterplans and other detailed proposals, in order to develop such schemes for wider benefits. This is not a criticism of the Section One's allocations at this stage, which can be seen as an early stage establishing the principle of development at each broad location.</p>
5. Resilience	Positive impacts	<p>There will be positive cumulative impacts resulting from the allocated Garden Communities in response to their individual potential to significantly support and improve the viability of the town centres of Colchester and Braintree within the North Essex Authorities area. Positive impacts can also be expected to benefit wider local areas in proximity to the Garden Communities, with enhanced public transport opportunities to such centres in the locality.</p>

Sustainability Objectives (SO)	Cumulative / Synergistic Impact	Commentary
6. Housing	Significant positive impacts	All of the Garden Communities can be expected to have significantly positive impacts on housing growth. Cumulatively, these impacts become more positive over the plan period and beyond, with the ability to successfully integrate all housing types and tenures, including gypsy and traveller provision.
7. Employment Opportunities	Positive impacts	All of the Garden Communities can be expected to have positive impacts on employment growth. Cumulatively, these impacts can become more positive over the plan period and beyond, with the ability to successfully integrate a wide range of local jobs within easy commuting distance from homes. On a broad strategic level, the provision of employment opportunities within easy commuting distance of homes can be considered larger than the scope of each Garden Community and more reflective of broader economic areas. It should also be acknowledged that the requirements of Garden Communities to benefit from improved access both to public transport modes (including existing rail links) and strategic roads, as all the allocated Garden Communities are, may in practice result in out-commuting beyond each Garden Community and local centres within the North Essex Authorities area. This should not be considered a criticism of the Garden Communities, being more reflective of travel to work flows and commuting patterns within the North Essex Authorities area. The cumulative implications of the Garden Communities capitalises on the existing employment areas of Skyline (in the case of the West of Braintree Garden Community), the University (for the Tendring / Colchester Borders Garden Community) and a range of B-use and retail class opportunities associated with the town of Colchester and Tollgate (for the benefit of the Colchester / Braintree Borders Garden Community).
8. Mixed-use Opportunities	Significant positive impacts	All of the Garden Communities can be expected to have a strong prospect of providing the full suite of required mixed-use opportunities, including the provision of both primary and secondary schools. This will have significant cumulative benefits across the North Essex Authorities area and wider benefits for existing communities in the broad areas for each Garden Community. There are likely to be additional cumulative benefits associated with wider health outcomes outside the direct scope of the Garden City principles.
9. Environmental Quality & Sustainability	Significant positive impacts	All of the Garden Communities can be expected to have a strong prospect of providing the full suite of open space, allotments/food production areas, biodiversity gains and SuDS. This will ensure cumulative benefits across the North Essex Authorities area and wider

Sustainability Objectives (SO)	Cumulative / Synergistic Impact	Commentary
		benefits for existing communities in the broad areas for each Garden Community. There are likely to be additional cumulative benefits associated with wider health outcomes outside the direct scope of the Garden City principles.
10. Developability / Deliverability	No impact	It is not considered that there are any cumulative themes associated from the deliverability / developability of the Garden Communities that would give rise to any sustainability impacts.

Temporal Effects of the Allocated Garden Communities

It can be considered that, in response to the exploration of Garden Communities to meet residual unmet housing needs within the HMA in the latter stages of the three authorities' Local Plan periods and beyond (the 'long term' as defined in this SA report), there are no temporal effects that can be identified at this stage. The SA identifies the impacts of the Garden Communities at their maximum intended scales, beyond plan periods.

Secondary Effects of the Allocated Garden Communities

As specified throughout the above there can be considered numerous secondary benefits resulting from the development of the Garden Communities. These relate to the sustainability effects that can be expected to be realised in the wider localities of each Garden Community, particularly regarding the level of services and infrastructure that can be utilised by existing communities. There can also be expected to be small secondary positive impacts on the environmental quality of the town centres of Colchester and Braintree, associated with enhanced public transport links to these centres. Although it can be viewed that enhanced public transport links to centres would only offset the increased level of growth resulting from the Garden Communities, it can be assumed that links will also result in reduced traffic movements into centres along any established routes, including those peripheral areas of Colchester and Braintree, encouraging a more widespread modal shift.

Proposed Mitigation Measures / Recommendations Regarding the Allocated Garden Communities

The Garden Communities are being carefully developed through effective masterplanning, in order to positively adhere to issues surrounding physical limitations, in particular access arrangements to sites, infrastructure requirements and strategies regarding permeability and interconnectivity within the new settlements.

The following recommendations are made regarding the selection of Garden Community options within the three broad locations of the allocated Garden Communities.

Tendring / Colchester Borders

The SA indicates that option GCEC1 is the most sustainable option, due to its smaller scale and therefore comparatively minimal impacts. Despite this, it is possible that mitigation might be required in the form of habitat creation and management at the Garden Community due to possible impacts on wintering birds, as

identified within the AA. With this in mind, it may be more appropriate for a larger option to be considered in order to address this possible requirement. Option GCE3 will require some level of mitigation in regard to the presence of Bullock Wood SSSI, and it is recommended that this localised area be protected in future masterplans. It is recommended that severance issues surrounding the A137 are also addressed in masterplans and transport interconnectivity.

Colchester / Braintree Borders

Options GCWC1 and GCWC3 represent, broadly, the most sustainable options within the Colchester / Braintree Borders area. Option GCWC1 contains the Marks Tey Brickpit SSSI, however its location at the north east boundary in each instance ensures that this designation can be protected and enhanced through the requirements of a surrounding belt of countryside to prevent sprawl and this is recommended. Issues surrounding the Domsey Brook should also be factored into any development of GCWC3 as blue infrastructure. Options GCWC2 and GCWC4 are in close proximity to a Scheduled Monument (a Roman villa 450m south of Warren's Farm to the north) and could affect the setting of this asset, and enhancement of this asset should be sought within the wider detailed masterplan. Impacts on the residential amenity of the settlements of Marks Tey and Little Tey are issues surrounding the options GCWC1, GCWC2 and GCWC4. A buffer separation will likely be needed to be developed through masterplanning to minimise certain impacts on existing communities and these should be subject to community engagement.

West of Braintree

The smaller option GCWB1 is considered the most sustainable option in West of Braintree due to an increased likelihood of negative impacts associated with nature conservation and heritage assets to the western boundary of option GCWB2. Both options will need to address the presence of heritage assets throughout the area, particularly in the north associated with the Conservation Area of Great Saling which contains a range of listed buildings including grade II as well as the Registered Park and Garden of Saling Grove, and seek enhancements at the masterplanning stage. It is also recommended that a buffer separation will likely be needed to be developed through masterplanning to minimise certain impacts on existing communities, specifically in relation to residents in Stebbing Green and Blake End. The masterplans should be subject to community engagement.

The Assessment of Alternative (Cumulative) Garden Community (GC) Option Permutations

Introduction

It is important that within the scope of identifying reasonable options for growth in the North Essex Authorities area, permutations of different Garden Community options are explored. It is possible that some combinations of Garden Community options might yield heightened benefits than those of the preferred Garden Communities through their cumulative analysis and for this reason these need to be assessed within this SA.

Identification of the Alternative Garden Community (GC) Option Permutations

It should be noted that multiple possible alternative permutations of Garden Communities exist, including an alternative exploring whether needs can be met without Garden Communities altogether (please see the

appraisal of those alternatives explored for the Spatial Strategy in Policy SP2 of this report). With that in mind, it is important to define what constitutes a 'reasonable alternative'. The following table represents those permutations that can be considered theoretically 'reasonable' alongside the specific reason behind their identification. The final determination as to whether they are 'reasonable' at this stage will result from each option's appraisal.

Scenario	Sites forming Permutation			Why considered a reasonable alternative?
1.	West of Braintree	Monks Wood	Tendring / Colchester Borders	This scenario has been identified in light of an assumption that A120 re-routing will either benefit (i.e. improve access to) one of Monks Wood or the Colchester / Tendring Borders Garden Community (based on the options currently being consulted upon at the time of writing). This views Monks Wood as a more direct alternative to the Colchester / Tendring Borders Garden Community than other options.
2.	Metro Plan	Tendring / Colchester Borders	North of Colchester	This scenario represents an eastern focus of Garden Communities to address historical undersupply in Tendring (and the lack of an up to date development plan since 2011).
3.	Metro Plan	Tendring / Colchester Borders	Colchester / Braintree Borders	This scenario was identified within the CAUSE 'Metro Plan' submission. It considers that the Metro Plan should be supplemented with a Garden Community at Tendring / Colchester Borders alongside a smaller amount of growth at the Colchester / Braintree Borders at a scale similar to Thorpe-le-Soken, Weeley, Great Bentley and Alresford, with development focused up to a 10minute walking distance from Marks Tey station.
4.	North Colchester	Colchester / Braintree Borders	Tendring / Colchester Borders	This scenario has been identified based on Colchester being the largest, main settlement and 'regional centre' within the North Essex area, and focuses single development Garden Community options (i.e. not a series of expanded settlements as per the Metro Plan option) in this broad area.
5.	West of Braintree	Monks Wood	Colchester / Braintree Borders	This scenario represents a western focus of Garden Communities to address the fact that housing in Braintree is relatively unaffordable.
6.	Monks Wood	West of Braintree	N/A	This scenario also represents a western focus to address the fact that housing in Braintree is relatively unaffordable, however with two Garden Communities only.
7.	West of	Colchester /	Metro Plan	This scenario represents a distribution that best

Scenario	Sites forming Permutation			Why considered a reasonable alternative?
	Braintree	Braintree Borders		responds to the notion of each LPA meeting their own identified needs in their administrative areas with no cross-boundary implications.
8.	Metro Plan	Tendring / Colchester Borders	West of Braintree	This scenario has been identified as it avoids the A120 re-routing uncertainty that exists at the current time. Under this scenario, three Garden Communities have been explored, to maximise the certainty of developability in the plan period.
9.	Tendring / Colchester Borders	West of Braintree	N/A	This scenario has been identified as it avoids the A120 re-routing uncertainty that exists at the current time. Under this scenario, two Garden Communities have been explored.

The Appraisal of the Alternative Garden Community (GC) Option Permutations

The assessment of the above scenarios is contained within the following sub-sections using the methodology for Garden Communities.

Objective 1: Physical Limitations – Absence of insurmountable problems (e.g. access, ground conditions, flood risk, hazardous risks, pollution, contamination and air quality)

Sustainability Objective (SO)	Scenario								
	1	2	3	4	5	6	7	8	9
1. Physical Limitations	0	-	0	-	-	0	0	0	0

Commentary:

Scenario 1: The geographic location of these Garden Community options is such that impacts are unlikely to give rise to any significant cumulative impacts regarding flood risk. It is possible that heightened negative impacts could be experienced at Marks Farm roundabout through the development of both West of Braintree and Monks Wood GC options should certain A120 consultation options become preferred. This could affect issues such as access, congestion and air quality away from the Garden Community options but as a result of an expected increase in traffic movements resulting from them. Despite this, much of these cumulative implications are theoretical and qualitative at this stage, and there will be no impacts highlighted for this option.

Scenario 2: The geographic distribution of these Garden Community options is such that negative impacts can be expected surrounding congestion and air quality in and around the town of Colchester, particularly in the east of the town and those roads permeating the town in this area. This is in view of significant development surrounding the town. In addition, the Metro Plan model of relying on employment needs to largely be met in Colchester and at the University is likely to marginally increase these congestion and air quality impacts; however it should be acknowledged that commuting to this area is intended to be fore mostly via rail links. Nevertheless, negative impacts have been identified for this scenario. Other problems surrounding flood risk and pollution are however not expected to be cumulatively significant.

Scenario 3: The Metro Plan model of relying on employment needs to largely be met in Colchester and at the University is likely to marginally increase congestion and air quality impacts; however it should be acknowledged that commuting to this area is intended to be fore mostly via rail links. Other problems surrounding flood risk and pollution are however not expected to be cumulatively significant. The geographic distribution of the options is such that minimal cumulative impacts can be expected regarding physical limitations, and as such, no impacts have been highlighted for this option.

Scenario 4: The geographic distribution of these Garden Community options is such that negative impacts can be expected surrounding congestion and air quality in and around the town of Colchester, particularly in the east of the town and those roads permeating the town in this area. This is in view of significant development surrounding the town. Other problems surrounding flood risk and pollution are however not expected to be cumulatively significant. Nevertheless, negative impacts have been identified for this scenario.

Scenario 5: The geographic location of these Garden Community options is such that impacts are unlikely to give rise to any significant cumulative impacts regarding flood risk. It is possible that heightened negative impacts could be experienced at Marks Farm roundabout through the development of both West of Braintree and Monks Wood GC options should certain A120 consultation options become preferred. This could affect issues such as access, congestion and air quality away from the Garden Community options but as a result of an expected increase in traffic movements resulting from them. Based on an assumption that the Monks Wood and Colchester / Braintree Borders options would not both be viable / developable from any one A120 re-routing option, the access implications surrounding both would likely have some negative impacts in the broad area. It should be noted that these cumulative implications are theoretical and qualitative at this stage; however for the purposes of a consistent appraisal across all scenarios, negative impacts have been highlighted.

Scenario 6: The geographic location of these Garden Community options is such that impacts are unlikely to give rise to any significant cumulative impacts regarding flood risk. It is possible that heightened negative impacts could be experienced at Marks Farm roundabout through the development of both West of Braintree and Monks Wood GC options should certain A120 consultation options become preferred. This could affect issues such as access, congestion and air quality away from the Garden Community options but as a result of an expected increase in traffic movements resulting from them. Despite this, much of these cumulative implications are theoretical and qualitative at this stage, and there will be no impacts highlighted for this option.

Scenario 7: There are unlikely to be any negative cumulative impacts resulting from this scenario, based on the geographic dispersal of the respective development options.

Scenario 8: The Metro Plan model of relying on employment needs to largely be met in Colchester and at the University is likely to marginally increase congestion and air quality impacts; however it should be acknowledged that commuting to this area is intended to be fore mostly via rail links. Other problems surrounding flood risk and pollution are however not expected to be cumulatively significant. The geographic distribution of the options is such that minimal cumulative impacts can be expected regarding physical limitations, and as such, no impacts have been highlighted for this option

Scenario 9: There are unlikely to be any negative cumulative impacts resulting from this scenario, based on the geographic dispersal of the respective development options.

Objective 2: Impacts – Acceptable impacts on high quality agricultural land, important landscape features, townscape features, sites of nature conservation interest and heritage assets

Sustainability Objective (SO)	Scenario								
	1	2	3	4	5	6	7	8	9
2. Impacts	0	-	-	-	-	0	0	?	0

Commentary:

Scenario 1, 4- 9: The AA indicates that 'providing the North Essex Authorities continue to collaborate and prepare the necessary RAMS, and in close consultation with Natural England, and the RAMS are ready for implementation prior to adoption of the Section a and Section 2 Local Plans, the Strategic Section 1 Local Plans is not predicted to result in adverse effects on the integrity of the Stour and Orwell Estuaries SPA/Ramsar, Hamford Water SPA/Ramsar, Essex Estuaries SAC, Colne Estuary SPA/Ramsar, or Blackwater Estuary SPA/Ramsar, either alone or in-combination with other plans and projects as a result of recreation.' Therefore no cumulative impacts are highlighted for the majority of the Garden Community permutations.

Scenarios 2-3: The AA states that wintering bird surveys will be required for Tendring Colchester Borders Garden Community as part of any project level development proposals and masterplanning, to determine the sites individual importance for golden plover and lapwing and inform mitigation proposals. It adds that if required, mitigation will need to create and manage suitably located habitat which maximises feeding productivity for these SPA species, and such mitigatory habitat would need to be provided and fully functional prior to development which would affect significant numbers of SPA birds. This issue, and the requirement for mitigation, can be expected to be exacerbated in those scenarios that allocate the Tendring / Colchester Borders Garden Community with the Metro Plan option due to the increased level of growth in Tendring in accumulation with Tendring's Section Two allocations.

Landscape impacts can be expected to be more pertinent in those locations where multiple Garden Communities are geographically in close proximity; particularly for scenario 5 (including both the Garden Community options of Monks Wood and Colchester / Braintree Borders), scenario 2 (representing an eastern focus) and scenario 4 (representing a focus on the town of Colchester). Some degree of negative landscape impacts can also be expected from those scenarios that explore development at the Tendring / Colchester Borders and Alresford under the Metro Plan model (scenarios 2, 3 and 8).

No cumulative impacts can be expected of any of the scenarios on the historic environment, aside from those landscape impacts highlighted above where the historic environment is intrinsically linked to the landscape and settlement patterns. This has been highlighted singularly for the Metro Plan in the assessment of this Garden Community option in isolation.

Objective 3: Environment/Amenity – Acceptable relationship with and impact on occupiers of existing properties and neighbouring areas/towns (maintaining adequate separation)

Sustainability Objective (SO)	Scenario								
	1	2	3	4	5	6	7	8	9
3. Environment / Amenity	0	0	0	-	-	0	0	0	0

Commentary:

Scenario 1: There will be no perceived coalescence cumulatively with any of the options that form this scenario.

Scenario 2: There will be no perceived coalescence cumulatively with any of the options that form this scenario. It can be considered that there will be negative relationships between new developments and existing communities at each settlement under the Metro Plan option; however such impacts are not the focus of this cumulative scenario assessment.

Scenario 3: There will be no perceived coalescence cumulatively with any of the options that form this scenario. It can be considered that there will be negative relationships between new developments and existing communities at each settlement under the Metro Plan option; however such impacts are not the focus of this cumulative scenario assessment.

Scenario 4: It can be considered that there will be some degree of negative impact on the existing north and north-eastern communities and estates of the town of Colchester arising from development at the scale of Garden Communities at North Colchester and the Tendring / Colchester Borders.

Scenario 5: There can be considered to be negative social impacts on the surrounding settlements of Coggeshall and Pattiswick holistically, resulting from the development of Garden Communities at Colchester / Braintree Borders and Monks Wood. Although the scale of the developments can be expected to factor in a significant and effective belt of countryside surrounding each Garden Community, to prevent sprawl, it can be considered that this scenario would lead to over development in the broad area.

Scenario 6: There will be no perceived coalescence cumulatively with any of the options that form this scenario.

Scenario 7: There will be no perceived coalescence cumulatively with any of the options that form this scenario. It can be considered that there will be negative relationships between new developments and existing communities at each settlement under the Metro Plan option; however such impacts are not the focus of this cumulative scenario assessment.

Scenario 8: There will be no perceived coalescence cumulatively with any of the options that form this scenario. It can be considered that there will be negative relationships between new developments and existing communities at each settlement under the Metro Plan option; however such impacts are not the focus of this cumulative scenario assessment.

Scenario 9: There will be no perceived coalescence cumulatively with any of the options that form this scenario.

Objective 4: Transport – Incorporation of integrated and accessible sustainable transport systems, with walking, cycling and public transport designed to be the most attractive forms of local transport

Sustainability Objective (SO)	Scenario								
	1	2	3	4	5	6	7	8	9
4. Transport	?	+	+	+	?	-	+	+	+

Commentary:

Scenario 1: There will be uncertain cumulative impacts resulting from the Garden Communities responding to this scenario, in response to their individual potential to improve public transport links within the North Essex Authorities area. Whereas West of Braintree and Tendring / Colchester Borders can be expected to integrate varying levels of public transport infrastructure and choice, the Garden Community option of Monks Wood does not benefit from an existing rail station on site or in close proximity to serve the development. This hinders the ability of the proposal to improve sustainable movements to main employment areas and in response to a need to reduce the need for private car use. The notion of Garden Communities will however have positive impacts regarding an ability to provide walking and cycling through developments to serve any public transport interchanges and to access local services / centres.

Scenario 2: Positive impacts can be expected regarding the integration of public transport options across the relevant Garden Community options in accumulation. Impacts are limited however where the Metro Plan does not currently offer any comparable choice to rail links, however there can be considered cumulative positive outcomes across the eastern area of North Essex. It should be noted however that wider benefits across the whole plan area will be limited as a result of such a focus, with no single or cumulative links being of benefit to existing communities in Braintree District.

Scenario 3: Positive impacts can be expected regarding the integration of public transport options across the relevant Garden Community options in accumulation. Impacts are limited however where the Metro Plan does not currently offer any comparable choice to rail links, however there can be considered cumulative positive outcomes across this broad area of North Essex. It should be noted however that wider benefits across the whole plan area will be limited as a result of such a focus, with no single or cumulative links being of benefit to existing communities in the majority of Braintree District.

Scenario 4: Positive impacts can be expected regarding the integration of public transport options across the relevant Garden Community options in accumulation. Impacts are limited however where the North Colchester option does not currently offer any comparable choice to bus links, however there can be considered cumulative positive outcomes across the town of Colchester. It should be noted however that wider benefits across the whole plan area will be limited as a result of such a focus, with no single or cumulative links being of benefit to existing communities in Braintree District.

Scenario 5: There will be uncertain cumulative impacts resulting from the Garden Communities responding to this scenario, in response to their individual potential to improve public transport links within the North Essex Authorities area. Whereas West of Braintree and Colchester / Braintree Borders can be expected to integrate varying levels of public transport infrastructure and choice, the Garden Community option of Monks Wood does not benefit from an existing rail station on site or in close proximity to serve the development. This hinders the ability of the proposal to improve sustainable movements to main employment areas and in response to a need to reduce the need for

private car use. The notion of Garden Communities will however have positive impacts regarding an ability to provide walking and cycling through developments to serve any public transport interchanges and to access local services / centres. It should be noted however that wider benefits across the whole plan area will be limited as a result of such a focus, with no single or cumulative links being of benefit to existing communities in Tendring District.

Scenario 6: There will be negative cumulative impacts resulting from the Garden Communities responding to this scenario, in response to their individual potential to improve public transport links within the North Essex Authorities area. Whereas West of Braintree can be expected to integrate public transport infrastructure and choice, the Garden Community option of Monks Wood does not benefit from an existing rail station on site or in close proximity to serve the development. This hinders the ability of the proposal to improve sustainable movements to main employment areas and in response to a need to reduce the need for private car use. It should be noted in addition that wider benefits across the whole plan area will be limited as a result of such a focus, with no single or cumulative links being of benefit to existing communities in Colchester Borough or Tendring District.

Scenario 7: Positive impacts can be expected regarding the integration of public transport options across the relevant Garden Community options in accumulation. Impacts are limited however where the Metro Plan does not currently offer any comparable choice to rail links, however there can be considered cumulative positive outcomes across the strategic area of North Essex.

Scenario 8: Positive impacts can be expected regarding the integration of public transport options across the relevant Garden Community options in accumulation. Impacts are limited however where the Metro Plan does not currently offer any comparable choice to rail links, however there can be considered cumulative positive outcomes across the broad area of North Essex. There will likely be wider benefits across the whole plan area as a result of such a focus, with single and cumulative links being of benefit to existing communities across the broad strategic area.

Scenario 9: Positive impacts can be expected regarding the integration of public transport options across both Garden Community options in accumulation in so far as they will benefit wider existing communities. Impacts are limited however in consideration of the distance between the two individual Garden Community options, and notions of integration of the two can be considered to not exist.

Objective 5: Resilience - Positive contribution towards maintaining resilient town centres and identified regeneration and development priority areas and institutions (including Essex University)

Sustainability Objective (SO)	Scenario								
	1	2	3	4	5	6	7	8	9
5. Resilience	+	+	++	?	+	?	++	++	+

Commentary:

Scenario 1: There will be positive cumulative impacts resulting from the Garden Community options contained within this scenario. This is in response to their individual potential to support and improve the vitality and viability of the town centres of Colchester and Braintree within the North Essex Authorities area. Impacts are limited however in response to the inclusion of Monks Wood and the lack of a choice of existing public transport links to town centres, notably regarding rail.

Scenario 2: There will be positive cumulative impacts resulting from the Garden Community options contained within this scenario. This is in response to their individual potential to support and improve the vitality and viability of the town centres of Colchester and Clacton within the North Essex Authorities area. Impacts are limited however in response to the inclusion of North Colchester and a perceived lack of a choice of public transport options to town centres, notably regarding rail.

Scenario 3: There will be significant positive cumulative impacts resulting from the Garden Community options contained within this scenario. This is in response to their individual potential to support and improve the vitality and viability of the town centres of Colchester and Clacton, as well as the University, within the North Essex Authorities area.

Scenario 4: There will be uncertain cumulative impacts resulting from the Garden Community options contained within this scenario. This is in response to their individual potential to support and improve the vitality and viability of the town centre of Colchester within the North Essex Authorities area. Impacts are limited however in response to the inclusion of North Colchester and a perceived lack of a choice of public transport options to town centres, notably regarding rail and the scope of the Garden Community options only benefitting the town centre of Colchester in this scenario.

Scenario 5: There will be positive cumulative impacts resulting from the Garden Community options contained within this scenario. This is in response to their individual potential to support and improve the vitality and viability of the town centres of Colchester and Braintree within the North Essex Authorities area. Impacts are limited however in response to the inclusion of Monks Wood and the lack of a choice of existing public transport links to town centres, notably regarding rail.

Scenario 6: There will be uncertain cumulative impacts resulting from the Garden Community options contained within this scenario. This is in response to their individual potential to support and improve the vitality and viability of the town centre of Braintree within the North Essex Authorities area. Impacts are limited in response to the inclusion of Monks Wood and the lack of a choice of existing public transport links to town centres, notably regarding rail, and the scope of the Garden Community options only benefitting the town centre of Braintree in this scenario.

Scenario 7: There will be significant positive cumulative impacts resulting from the Garden Community options contained within this scenario. This is in response to their individual potential to support and improve the vitality and viability of the town centres of Colchester, Braintree and Clacton, within the North Essex Authorities area.

Scenario 8: There will be significant positive cumulative impacts resulting from the Garden Community options contained within this scenario. This is in response to their individual potential to support and improve the vitality and viability of the town centres of Colchester, Braintree and Clacton, as well as the university, within the North Essex Authorities area.

Scenario 9: There will be positive cumulative impacts resulting from the Garden Community options contained within this scenario. This is in response to their individual potential to support and improve the vitality and viability of the town centres of Colchester and Braintree within the North Essex Authorities area.

Objective 6: Housing – Provision of a mix of tenures, including affordable homes and a range of housing types (including self-build/custom build and gypsy and traveller pitches).

Sustainability Objective (SO)	Scenario								
	1	2	3	4	5	6	7	8	9
6. Housing	+	--	--	-	-	--	-	-	--

Commentary:

Scenario 1: The distribution of growth can be seen to have some minor positive implications in so far as growth will occur within all three LPA areas, albeit predominantly focused around Braintree. This broadly aligns to an aspiration of sustainability within this report; that there should be a desire for strategic growth to supplement the growth requirements of the three authorities' Local Plans in order to address existing housing needs across the whole area and on a district / borough level.

Scenario 2: The cumulative impacts of focusing all required Garden Communities in the eastern area of North Essex can be seen to be negative across the strategic area; from a sustainability point of view there should be a desire for strategic growth to supplement the growth requirements of the three authorities' Local Plans in order to address existing housing needs across the whole area and on a district / borough level. This better aligns the Section One with the requirements of LPAs as iterated in the NPPF. North Colchester can be considered to have implications surrounding development associated with the Solar Farm on site and its lifespan as permitted. In addition, the Metro Plan submission highlights development locations in response to those that were submitted as part of the Tendring District Council Local Plan call-for-sites process. Work undertaken to explore the suitability and feasibility of the Metro Plan option (Colchester Metro Town – Evaluation of Alternatives, 2017 (AECOM)) identifies that the current land 'availability' as identified through the call-for-sites submissions would only provide less than 3,000 dwellings at a density of 35 dwellings per hectare. The implication of this in regard to this scenario is that there would have to be a higher level of growth at the North Colchester and the Tendring / Colchester Borders Garden Community options. Not only would this lead to a worse distribution of growth than intended under the scenario, but there would be significant implications of what could be delivered in the plan period. For this reason, impacts are assessed as significantly negative.

Scenario 3: The distribution of growth can be seen to have some minor positive implications in so far as growth will occur within all three LPA areas, albeit predominantly focused around Colchester and Tendring. The Metro Plan submission highlights development locations in response to those that were submitted as part of the Tendring District Council Local Plan call-for-sites process. Work undertaken to explore the suitability and feasibility of the Metro Plan option (Colchester Metro Town – Evaluation of Alternatives, 2017 (AECOM)) identifies that the current land 'availability' as identified through the call-for-sites submissions would only provide less than 3,000 dwellings at a density of 35 dwellings per hectare. The implication of this in regard to this scenario is that there would have to be a higher level of growth at the Colchester / Braintree Borders Garden Community (contrary to the principle of the scenario) as well as the Tendring / Colchester Borders Garden Community. Not only would this lead to a worse distribution of growth than intended under the scenario, but there would be significant implications of what could be delivered in the plan period. For this reason, impacts are assessed as significantly negative.

Scenario 4: The cumulative impacts of focusing all required Garden Communities around the town of Colchester can be seen to be negative across the strategic area; from a sustainability point of view there should be a desire for strategic growth to supplement the growth requirements of the three authorities' Local Plans in order to address

existing housing needs across the whole area and on a district / borough level. This better aligns the Section One with the requirements of LPAs as iterated in the NPPF. North Colchester can additionally be considered to have implications surrounding development associated with the Solar Farm on site and its lifespan as permitted. For this reason, impacts are assessed as negative.

Scenarios 5 & 6: The cumulative impacts of focusing all required Garden Communities in the western area of North Essex can be seen to be negative across the strategic area; from a sustainability point of view there should be a desire for strategic growth to supplement the growth requirements of the three authorities' Local Plans in order to address existing housing needs across the whole area and on a district / borough level. This better aligns the Section One with the requirements of LPAs as iterated in the NPPF. There will be additional negative implications associated with two Garden Communities under scenario 6, which has been additionally assessed as having significant negative impacts as a result of not providing enough growth in the plan period and meeting OAN.

Scenario 7: This scenario will have positive impacts in theory, based on the distribution of the Garden Community options that focuses growth in each authority. Nevertheless, the Metro Plan submission highlights development locations in response to those that were submitted as part of the Tendring District Council Local Plan call-for-sites process. Work undertaken to explore the suitability and feasibility of the Metro Plan option (Colchester Metro Town – Evaluation of Alternatives, 2017 (AECOM)) identifies that the current land 'availability' as identified through the call-for-sites submissions would only provide less than 3,000 dwellings at a density of 35 dwellings per hectare. The implication of this in regard to this scenario is that there would have to be a higher level of growth at the West of Braintree and the Tendring / Colchester Borders Garden Communities. Not only would this lead to a worse distribution of growth than intended under the scenario, but there would be significant implications of what could be delivered in the plan period. For this reason, impacts are assessed as negative.

Scenario 8: The distribution of growth can be seen to have some minor positive implications in so far as growth will occur within all three LPA areas, albeit predominantly focused around Colchester and Tendring. The Metro Plan submission highlights development locations in response to those that were submitted as part of the Tendring District Council Local Plan call-for-sites process. Work undertaken to explore the suitability and feasibility of the Metro Plan option (Colchester Metro Town – Evaluation of Alternatives, 2017 (AECOM)) identifies that the current land 'availability' as identified through the call-for-sites submissions would only provide less than 3,000 dwellings at a density of 35 dwellings per hectare. The implication of this in regard to this scenario is that there would have to be a higher level of growth at the West of Braintree Garden Community (extending into Uttlesford and outside the HMA) as well as the Tendring / Colchester Borders Garden Community. Not only would this lead to a worse distribution of growth than intended under the scenario, but there would be significant implications of what could be delivered in the plan period. For this reason, impacts are assessed as negative.

Scenario 9: This scenario will have positive impacts in theory, based on the distribution of the Garden Community options that focuses growth in each authority. There will be additional negative implications associated with two Garden Communities under scenario 6, which has been additionally assessed as having significant negative impacts as a result of not providing enough growth in the plan period and meeting OAN.

Objective 7: Employment Opportunities – Provision for a wide range of local jobs within easy commuting distance from homes

Sustainability Objective (SO)	Scenario								
	1	2	3	4	5	6	7	8	9
7. Employment Opportunities	?	-	?	-	-	--	+	+	?

Commentary:

Scenario 1: There can be expected to be positive impacts on employment growth through the distribution of development within this scenario; from a sustainability point of view there should be a desire for strategic growth to supplement the growth requirements of the three authorities' Local Plans in order to address existing employment needs across the whole area and on a district / borough level. This better aligns the Section One with the requirements of LPAs as iterated in the NPPF. The scenario also seeks to locate development in close proximity to the Skyline development in west Braintree, however impacts are limited due to the lack of existing rail links at Monks Wood and for that reason; uncertain impacts are highlighted within this assessment.

Scenario 2: The Metro Plan can be considered reliant to some degree on a Garden Community at Tendring / Colchester Borders in order to capitalise on employment provision in that wider area. This is fundamental to the principle of the option's satellite model extending outward from Colchester town. For that reason, the cumulative impacts of the Metro Town option with the Tendring / Colchester Borders Garden Community can be seen to have positive impacts in combination. The cumulative impacts of focusing all required Garden Communities in the eastern area of North Essex can be seen as negative across the strategic area; from a sustainability point of view there should be a desire for strategic growth to supplement the growth requirements of the three authorities' Local Plans in order to address existing employment needs across the whole area and on a district / borough level. This better aligns the Section One with the requirements of LPAs as iterated in the NPPF.

Scenario 3: The Metro Plan can be considered reliant to some degree on a Garden Community at Tendring / Colchester Borders in order to capitalise on employment provision in that wider area. This is fundamental to the principle of the option's satellite model extending outward from Colchester town. For that reason, the cumulative impacts of the Metro Town option with the Tendring / Colchester Borders Garden Community can be seen to have some positive impacts in combination. The cumulative impacts of focusing all required Garden Community options around Colchester can be seen as negative across the strategic area; from a sustainability point of view there should be a desire for strategic growth to supplement the growth requirements of the three authorities' Local Plans in order to address existing employment needs across the whole area and on a district / borough level. This better aligns the Section One with the requirements of LPAs as iterated in the NPPF. Overall, there will be uncertain impacts associated with the scenario, based on the above considerations but also reflecting an element of growth in Braintree district; albeit likely beyond the plan period.

Scenario 4: The cumulative impacts of focusing all required Garden Communities in the area of Colchester town can be seen as negative across North Essex; from a sustainability point of view there should be a desire for strategic growth to supplement the growth requirements of the three authorities' Local Plans in order to address existing employment needs across the whole area and on a district / borough level. This better aligns the Section One with the requirements of LPAs as iterated in the NPPF.

Scenario 5: The cumulative impacts of focusing all required Garden Communities in the Braintree area of North Essex can be seen as negative across the strategic area; from a sustainability point of view there should be a desire for strategic growth to supplement the growth requirements of the three authorities' Local Plans in order to address existing employment needs across the whole area and on a district / borough level. This better aligns the

Section One with the requirements of LPAs as iterated in the NPPF. The scenario seeks to locate development in close proximity to the Skyline development in west Braintree, however does not capitalise on the employment benefits associated with the University. Additionally, impacts are further limited due to the lack of existing rail links at Monks Wood and for that reason negative impacts are highlighted within this assessment.

Scenario 6: The cumulative impacts of focusing two Garden Communities in the Braintree area of North Essex can be seen as negative across the strategic area; from a sustainability point of view there should be a desire for strategic growth to supplement the growth requirements of the three authorities' Local Plans in order to address existing employment needs across the whole area and on a district / borough level. This better aligns the Section One with the requirements of LPAs as iterated in the NPPF. Although the scenario seeks to locate development in close proximity to the Skyline development in west Braintree, impacts are limited further due to the lack of existing rail links at Monks Wood, resulting in a significantly negative impact on this objective.

Scenario 7: The Metro Plan can be considered reliant to some degree on a Garden Community at Tendring / Colchester Borders in order to capitalise on employment provision in that wider area. This is fundamental to the principle of the option's satellite model extending outward from Colchester town. For that reason, the cumulative impacts of the Metro Town option with the Tendring / Colchester Borders Garden Community can be seen to have some positive impacts in combination. The cumulative impacts of distributing the Garden Communities in the Braintree area of North Essex can be seen as positive across the strategic area; from a sustainability point of view there should be a desire for strategic growth to supplement the growth requirements of the three authorities' Local Plans in order to address existing employment needs across the whole area and on a district / borough level. The scenario also seeks to locate development in close proximity to the Skyline development in west Braintree.

Scenario 8: The Metro Plan can be considered reliant to some degree on a Garden Community at Tendring / Colchester Borders in order to capitalise on employment provision in that wider area. This is fundamental to the principle of the option's satellite model extending outward from Colchester town. For that reason, the cumulative impacts of the Metro Town option with the Tendring / Colchester Borders Garden Community can be seen to have some positive impacts in combination. The cumulative impacts of distributing the Garden Communities in the Braintree area of North Essex can be seen as positive across the strategic area; from a sustainability point of view there should be a desire for strategic growth to supplement the growth requirements of the three authorities' Local Plans in order to address existing employment needs across the whole area and on a district / borough level. The scenario also seeks to locate development in close proximity to the University and the Skyline development.

Scenario 9: The cumulative impacts of distributing the Garden Communities in the Braintree area of North Essex can be seen as positive across the strategic area; from a sustainability point of view there should be a desire for strategic growth to supplement the growth requirements of the three authorities' Local Plans in order to address existing employment needs across the whole area and on a district / borough level. The scenario also seeks to locate development in close proximity to the University and the Skyline development, providing comparatively easy access to established employment growth areas. Despite this, the development of two Garden Communities would not align housing and employment growth to the levels required of the OAN report, and as such, uncertain impacts have been identified for this scenario.

Objective 8: Mixed-use Opportunities – Inclusion of cultural, recreational and shopping facilities in walkable, vibrant, sociable neighbourhoods.

Sustainability Objective (SO)	Scenario								
	1	2	3	4	5	6	7	8	9
8. Mixed-use Opportunities	++	?	?	++	++	+	?	?	+

Commentary:

Scenario 1: The Garden Communities within this scenario can be expected to have a strong prospect of providing the full suite of required mixed-use opportunities, including the provision of both primary and secondary schools. This will have significant cumulative benefits across the North Essex Authorities area and wider benefits for existing communities in the broad areas for each Garden Community. There are likely to be additional cumulative benefits associated with wider health outcomes outside the direct scope of the Garden City principles.

Scenarios 2, 3, 7 & 8: The majority of the Garden Communities within this scenario can be expected to have a strong prospect of providing the full suite of required mixed-use opportunities, including the provision of both primary and secondary schools. This will have significant cumulative benefits across the North Essex Authorities area and wider benefits for existing communities in the broad areas for each Garden Community. There are likely to be additional cumulative benefits associated with wider health outcomes outside the direct scope of the Garden City principles. Despite this, regarding the Metro Plan option, the inclusion of cultural, recreational and shopping facilities in walkable, vibrant, sociable neighbourhoods is unlikely to be wholly possible at each location due to the limited scale of development at each individual settlement and within the 10 minute walking radius from each rail station. Although existing infrastructure and services are likely to exist in close proximity to each settlement focus, this is likely to put pressure on existing infrastructure capacities, such as GPs and schools, without the requisite development (dwelling) thresholds being met for the provision of new infrastructure. For this reason, impacts are assessed as uncertain for this scenario.

Scenario 4: The Garden Communities within this scenario can be expected to have a strong prospect of providing the full suite of required mixed-use opportunities, including the provision of both primary and secondary schools. This will have significant cumulative benefits across the North Essex Authorities area and wider benefits for existing communities in the broad areas for each Garden Community. There are likely to be additional cumulative benefits associated with wider health outcomes outside the direct scope of the Garden City principles.

Scenario 5: The Garden Communities within this scenario can be expected to have a strong prospect of providing the full suite of required mixed-use opportunities, including the provision of both primary and secondary schools. This will have significant cumulative benefits across the North Essex Authorities area and wider benefits for existing communities in the broad areas for each Garden Community. There are likely to be additional cumulative benefits associated with wider health outcomes outside the direct scope of the Garden City principles.

Scenario 6: The Garden Communities within this scenario can be expected to have a strong prospect of providing the full suite of required mixed-use opportunities, including the provision of both primary and secondary schools. This will have significant cumulative benefits across the North Essex Authorities area and wider benefits for existing communities in the broad areas for each Garden Community. There are likely to be additional cumulative benefits associated with wider health outcomes outside the direct scope of the Garden City principles. Impacts are limited however, where the delivery of two Garden Communities within this scenario can be expected to have comparably less wide scoping benefits than other scenarios.

Scenario 9: The Garden Communities within this scenario can be expected to have a strong prospect of providing

the full suite of required mixed-use opportunities, including the provision of both primary and secondary schools. This will have significant cumulative benefits across the North Essex Authorities area and wider benefits for existing communities in the broad areas for each Garden Community. There are likely to be additional cumulative benefits associated with wider health outcomes outside the direct scope of the Garden City principles. Impacts are limited however, where the delivery of two Garden Communities within this scenario can be expected to have comparably less wide scoping benefits than other scenarios.

Objective 9: Environmental Quality & Sustainability – Incorporation of generous areas of publicly accessible open space, allotments/food production areas, biodiversity gains, SuDS and zero-carbon/energy-positive technology to ensure climate resilience.

Sustainability Objective (SO)	Scenario								
	1	2	3	4	5	6	7	8	9
9. Environmental Quality & Sustainability	++	-	-	++	++	++	-	-	++

Commentary:

Scenarios 1, 4, 5, 6 & 9: The Garden Communities within this scenario can be expected to have a strong prospect of providing generous areas of publicly accessible open space, allotments/food production areas, biodiversity gains, SuDS and zero-carbon/energy-positive technology to ensure climate resilience. This will have significant cumulative benefits across the North Essex Authorities area and wider benefits for existing communities in the broad areas for each Garden Community. There are likely to be additional cumulative benefits associated with wider health outcomes outside the direct scope of the Garden City principles.

Scenarios 2, 3, 7 & 8: The majority of the Garden Communities within this scenario can be expected to have a strong prospect of providing the full suite of required mixed-use opportunities, including the provision of both primary and secondary schools. This will have significant cumulative benefits across the North Essex Authorities area and wider benefits for existing communities in the broad areas for each Garden Community. There are likely to be additional cumulative benefits associated with wider health outcomes outside the direct scope of the Garden City principles. Despite this, regarding the Metro Plan option, the principle of a series of satellite developments creates notional issues regarding both achieving a fully integrated and connected green grid at the settlement level and also the incorporation of generous areas of publicly accessible open space, allotments/food production areas, biodiversity gains, SuDS and zero-carbon/energy-positive technology to ensure climate resilience. The requirements for open space are likely to be a significant requirement due to the option's focus on Tendring, which as a district contains numerous international / European designated sites in coastal and estuarine areas. The AA notes the possibility that habitat creation might be needed to mitigate the impacts on wintering birds within the Tendring area. For this reason, negative impacts have been highlighted in relation to these scenarios, however it should be noted that the level of growth submitted is unlikely to be provided as identified in this SA and the Colchester Metro Town – Evaluation of Alternatives, 2017 (AECOM) document.

Objective 10: Developability / Deliverability - The growth area is available, commercially attractive, and capable of delivering necessary physical/social/green infrastructure and could be viably developed within [6-10] years. Satisfactory mechanisms are in place to capture increase in land value to meet infrastructure costs and manage and maintain assets in the long term

Sustainability Objective (SO)	Scenario								
	1	2	3	4	5	6	7	8	9
10. Developability / Deliverability	0	0	0	0	0	0	0	0	0

Commentary:

Scenarios 1 - 9: It is not considered that there are any cumulative themes associated from the deliverability / developability of the Garden Communities that would give rise to any sustainability impacts.

7.5.4 Reasons for Rejecting the Alternative Garden Community (GC) Option Permutations

The preferred / allocated scenario is that contained within the 'Cumulative & Synergistic Impacts of the Allocated Garden Communities' section of this SA, above. The Garden Communities have been selected / allocated due to their ability to meet offer a broad geographic dispersal meeting the individual and combine North Essex growth requirements / needs across all of the participating Section One authorities. The options explored also reflect the best possible spread of wider benefits to existing and new communities, reflecting accessible locations that will have no location-based cumulative impacts. They can also be seen to represent the most sustainable options in reflection of potential benefits and opportunities.

This section outlines the main reasons for rejecting the alternative Garden Community option permutations explored.

Table 30: The Reasons for Rejecting the Alternative Garden Community (GC) Option Permutations

Scenario	Sites forming Permutation			Reason for Rejection
1.	West of Braintree	Monks Wood	Tendring / Colchester Borders	Monks Wood is currently located on the highly trafficked and single carriageway section of the A120. The only other roads in the vicinity are very rural lanes in the vicinity and no opportunity to access a site of this size by other routes. If the A120 project is to go ahead, 1 of the 5 options could see the new A120 run through the site, the other 4 would be distant from the site. Whilst any upgrade option would provide capacity on the existing A120 network, there are no guarantees that the project will go forward. With the exception of option A travel to

Scenario	Sites forming Permutation			Reason for Rejection
				the strategic highway network would need to be via Marks Tey to the east or Braintree to the west. In addition the project is not due to complete until 2026, so completions would not be able to start until that date. The employment market in Braintree is less strong than Colchester and major new employment areas are proposed on the west side of Braintree which is in close proximity to the West of Braintree garden community.
2.	Metro Plan	Tendring / Colchester Borders	North of Colchester	The discounting of the North Colchester site for a Garden Community was based on the negative environmental impacts of a large Garden Community on an area of significant landscape and environmental value. The Metro Plan option has been rejected due its inability to deliver the required growth, linked to deliverability / developability and the availability / lack of promotion of land within the model to the required scales. It is also not considered that a series of smaller developments can successfully combine to meet the requirements of sustainability / Garden City principles. Additionally, the deliverability and sustainability of Garden Communities was considered to be best served by their location in two distinct areas of the Borough as opposed to adjacent communities at both East and North Colchester.
3.	Metro Plan	Tendring / Colchester Borders	Colchester / Braintree Borders	The Metro Plan option has been rejected due its inability to deliver the required growth, linked to deliverability / developability and the availability / lack of promotion of land within the model to the required scales. It is also not considered that a series of smaller developments can successfully combine to meet the requirements of sustainability / Garden City principles.
4.	North Colchester	Colchester / Braintree Borders	Tendring / Colchester Borders	The discounting of the North Colchester site for a Garden Community was based on the negative environmental impacts of a large Garden Community on an area of significant landscape and environmental value. Additionally, the deliverability and sustainability of Garden Communities was considered to be best served by their location in two distinct areas of the Borough as opposed to adjacent communities at both East and North Colchester.
5.	West of Braintree	Monks Wood	Colchester / Braintree	Monks Wood is currently located on the highly trafficked and single carriageway section of the A120. The only

Scenario	Sites forming Permutation			Reason for Rejection
			Borders	other roads in the vicinity are very rural lanes in the vicinity and no opportunity to access a site of this size by other routes. If the A120 project is to go ahead, 1 of the 5 options could see the new A120 run through the site, the other 4 would be distant from the site. Whilst any upgrade option would provide capacity on the existing A120 network, there are no guarantees that the project will go forward. With the exception of option A travel to the strategic highway network would need to be via Marks Tey to the east or Braintree to the west. In addition the project is not due to complete until 2026, so completions would not be able to start until that date. The employment market in Braintree is less strong than Colchester and major new employment areas are proposed on the west side of Braintree which is in close proximity to the West of Braintree garden community. Additionally, the deliverability and sustainability of Garden Communities was considered to be best served by their location in three distinct areas of the strategic area.
6.	Monks Wood	West of Braintree	N/A	Monks Wood is currently located on the highly trafficked and single carriageway section of the A120. The only other roads in the vicinity are very rural lanes in the vicinity and no opportunity to access a site of this size by other routes. If the A120 project is to go ahead, 1 of the 5 options could see the new A120 run through the site, the other 4 would be distant from the site. Whilst any upgrade option would provide capacity on the existing A120 network, there are no guarantees that the project will go forward. With the exception of option A travel to the strategic highway network would need to be via Marks Tey to the east or Braintree to the west. In addition the project is not due to complete until 2026, so completions would not be able to start until that date. The employment market in Braintree is less strong than Colchester and major new employment areas are proposed on the west side of Braintree which is in close proximity to the West of Braintree garden community. The notion of two Garden Communities, based on assumptions made regarding commencement dates and delivery rates, will not provide enough homes to meet OAN in the plan period.
7.	West of	Colchester /	Metro Plan	The Metro Plan option has been rejected due its inability

Scenario	Sites forming Permutation			Reason for Rejection
	Braintree	Braintree Borders		to deliver the required growth, linked to deliverability / developability and the availability / lack of promotion of land within the model to the required scales. It is also not considered that a series of smaller developments can successfully combine to meet the requirements of sustainability / Garden City principles.
8.	Metro Plan	Tendring / Colchester Borders	West of Braintree	The Metro Plan option has been rejected due its inability to deliver the required growth, linked to deliverability / developability and the availability / lack of promotion of land within the model to the required scales. It is also not considered that a series of smaller developments can successfully combine to meet the requirements of sustainability / Garden City principles.
9.	Tendring / Colchester Borders	West of Braintree	N/A	The notion of two Garden Communities, based on assumptions made regarding commencement dates and delivery rates, will not provide enough homes to meet OAN in the plan period.



Place Services

Essex County Council

County Hall, Chelmsford, Essex CM1 1QH

T: +44 (0)333 013 6840

E: enquiries@placeservices.co.uk

www.placeservices.co.uk

June 2017



Essex County Council