



A Plan for Colchester Braintree Borders: Issues & Options Report (Regulation 18)

Draft Sustainability Appraisal (SA): Scoping & Environmental Report – November 2017





Contents

1.	Introduction	1
1.1	Background	1
1.2	A Plan for Colchester Braintree Borders	1
1.3	The Principle of the Garden Community in emerging Local Plans	2
2.	Sustainability Appraisal / Strategic Environmental Assessment	3
2.1	The Requirement for Sustainability Appraisal	3
2.2	The Sustainability Appraisal Process	4
2.3	The Aim and Structure of this Report	5
3.	Setting the Scope of the SA: Sustainability Context, Baseline and Objectives	6
3.1	Introduction	6
3.2	Plans and Programmes (Stage A1)	6
3.3	Baseline Information (Stage A2)	13
3.4	Key Sustainability Issues and Problems and Sustainability Objectives (Stage A3)	21
3.5	The Approach to Assessing the Colchester Braintree Borders Garden Community Plan	36
3.6	The Appraisal of the Plan's Content	43
4.	The Appraisal of the Plan's Vision and Principles	45
4.1	Introduction	45
4.2	A Vision for the Garden Community	45
4.3	Planning Themes and Principles of the Garden Community	52
5.	The Plan's Development Concept Options	65
5.1	The Identification of Options for Assessment	65
5.2	What has Sustainability Appraisals involved at this point?	68
5.3	The Appraisal of the Garden Community Development Concept Options	69
6.	Non-Technical Summary, Conclusions and Recommendations	83
6.1	The Plan's Themes and Principles	83
6.2	The Plan's Development Concept Option	87
6.3	Key Impacts of the Plan as a Whole	92
7.	Next Steps & Monitoring	94
7.1	Consultation	94

List of Tables

Table 1:	Key Documents	7
Table 2:	Key Sustainability Issues and Problems	22
Table 3:	The SA Objectives	33
Table 4:	Sustainability Framework for Assessing the Plan	36
Table 5:	Compatibility with the Sustainability Objectives: A Vision for the Garden Community	48
Table 6:	Impact on Sustainability Objectives: Theme 1 – Place and Integration	53
Table 7:	Impact on Sustainability Objectives: Theme 2 - Community	60
Table 8:	Impact on Sustainability Objectives: Theme 3 - Delivery	62
Table 9:	Summary of Impacts of the Plan's Themes and Principles	83
Table 10:	Summary of Impacts of the Plan's Development Concept and Alternative Option	87

Glossary of Acronyms

AA	Appropriate Assessment
ALC	Agricultural Land Classification
AQMA	Air Quality Management Area
BDC	Braintree District Council
CA	Conservation Area
CBBGC	Colchester Braintree Borders Garden Community
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
EU	European Union
GC	Garden Community
GCP	Garden City Principle
Ha	Hectare
HE	Historic England
HMA	Housing Market Area
HRA	Habitats Regulations Assessment
I&O	Issues and Options
LB	Listed Building
LCA	Landscape Character Assessment
LEP	Local Enterprise Partnership
LPA	Local Planning Authority
MSA	Minerals Safeguarding Area
NE	Natural England
NEGC	North Essex Garden Communities
NHS	National Health Service
NPPF	National Planning Policy Framework
OAN	Objectively Assessed Need
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
SFRA	Strategic Flood Risk Assessment
SHMA	Strategic Housing Market Assessment
SM	Scheduled Monument
SO	Sustainability Objective
SPA	Special Protection Area
SPD	Supplementary Planning Document
SSSI	Site of Specific Scientific Interest
SuDS	Sustainable Drainage System
TCPA	Town and Country Planning Association
UDC	Uttlesford District Council
UK	United Kingdom
WPA	Waste Planning Authority

1. Introduction

1.1 Background

Braintree District Council and Colchester Borough Council, 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 the Plan for Colchester Braintree Borders Issues and Options Report.

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 A Plan for Colchester Braintree Borders

The main purpose of the Plan is to set out a shared Vision for the new community at Colchester Braintree Borders and a strategy for its delivery. It intends to set out a strategy that includes both the requirement for 2,500 homes and related infrastructure to be delivered within the Plan period, with the majority of the development to be delivered over a longer-term beyond 2033.

It will also set out a range of development objectives that will help deliver this Vision, and more detailed policies that will guide land-use proposals and secure timely delivery of development and infrastructure in the short, medium and long term, in accordance with relevant Local Plan policies.

The Plan will need to have flexibility in the way that development might be delivered taking into account the long-term nature of a development of this scale, but must also be true to the development and design ambitions that are agreed for the new community.

The first stage in the plan-making process has been the preparation of an Issues and Options (Regulation 18) stage Plan. It intends to provide information to stakeholders and local communities, and invites comments and views on initial issues and options for the development of a Garden Community at Colchester Braintree Borders (CBBGC). The Plan represents the first stage of the production of a formal document to provide a framework for development which will guide the master planning stages that will follow.

This SA represents the appraisal of the Plan for Colchester Braintree Borders at the first Issues and Options stage and accompanies the consultation of the Plan.

1.3 The Principle of the Garden Community in emerging Local Plans

Local Plans are the main vehicle for conveying an area's growth requirements and how these will be accommodated. Braintree District Council, Colchester Borough Council and Tendring District Council agreed to come together through a shared desire to promote a sustainable growth strategy for the longer term. Each Local Planning Authority (LPA) in their production of Local Plans for their administrative areas, intend to adopt a strategic 'Section One' that addresses and articulates strategic priorities over the area of the three authorities. Central to this is the effective delivery of planned strategic growth, particularly housing and employment development, with the necessary supporting infrastructure.

The Plan for Colchester Braintree Borders Garden Community is being jointly prepared by David Lock Associates on behalf of Braintree District Council and Colchester Borough Council because the Garden Community area covers land in each authority's administrative boundary. This joint working has been brought about as a result of the Councils' inclusion of the principle of development of a new Garden Community in their emerging Local Plans.

It should be noted that development at the Colchester Braintree Borders Garden Community is identified in the joint Strategic Section One of the Tendring District, Colchester Borough and Braintree District Councils' Draft Local Plans. The principle of and need for allocating Garden Communities within the North Essex area is established within the strategic Section One for the aforementioned Local Planning Authorities' Local Plans. This is in consideration of a number of reasonable alternative approaches to delivering growth and meeting housing needs in both areas.

Within Section One, draft Local Plan Policy SP9 specifically refers to development of a Garden Community at the Colchester Braintree Borders and sets out the requirement for the preparation of a Strategic Growth Development Plan Document (DPD) that will provide a framework for the subsequent preparation of more detailed masterplans and other design and planning guidance for the site.

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’.

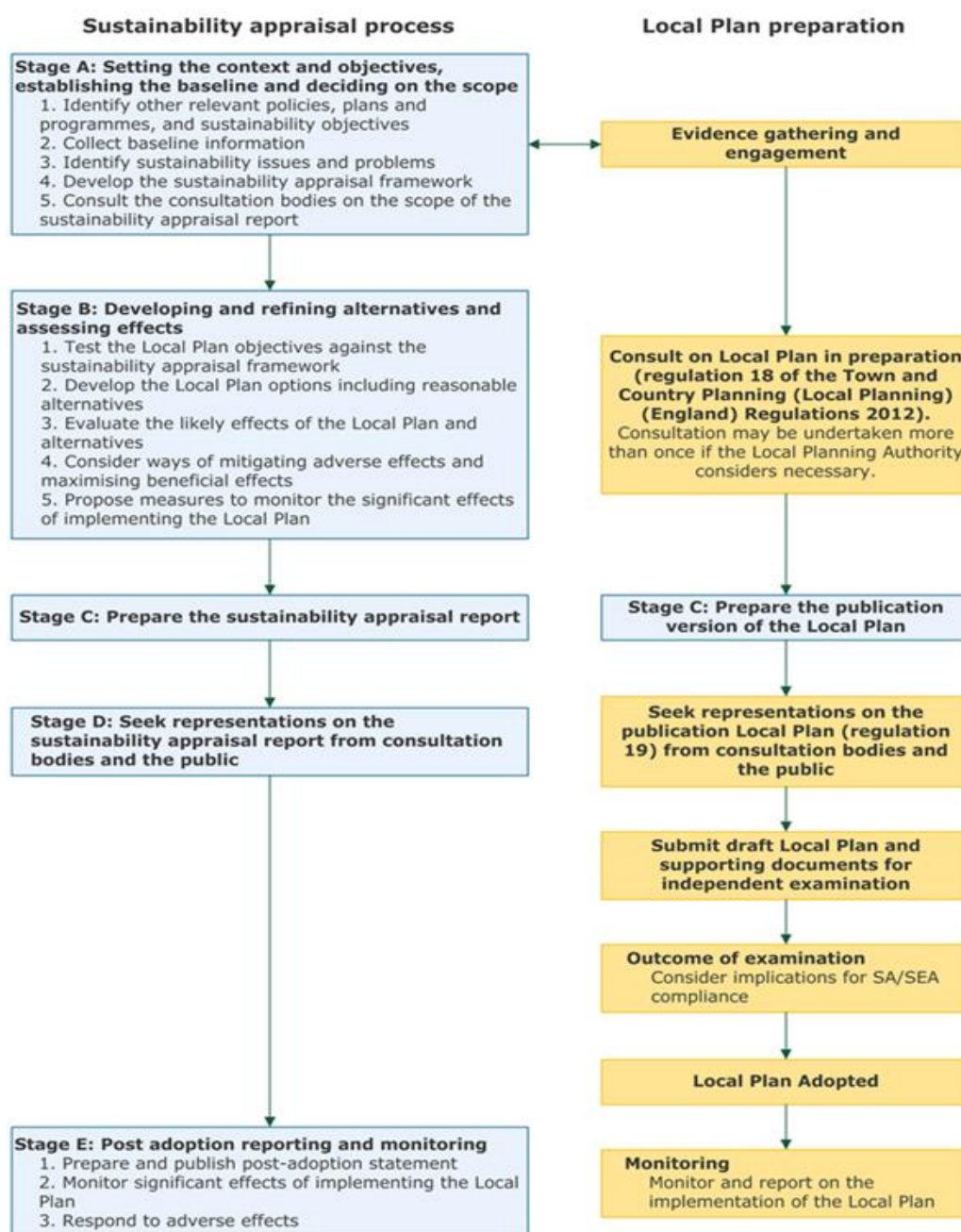
This includes Development Plan Documents. The aim of the SEA is to identify potentially significant environmental effects created as a result of the implementation of the plan or programme on issues such as *‘biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material 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 Colchester Braintree Borders Garden Community DPD 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 / DPD 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 Stages A and B in the SA process above. It is the intention of the Plan to follow the process of a second Regulation 18 consultation on the Plan's 'Preferred Options' in summer 2018 and with this in mind, elements of Stage B above will be completed through the accompanying SA at that stage.

The production of a Sustainability Appraisal (Environmental) Report is a statutory requirement at the Regulation 18 stage, and this SA Report has been produced to accompany the Plan for Colchester Braintree Borders.

This report is accompanied by two Annexes. These are:

- Annex A – Plans and Programmes
- Annex B – Baseline Information

Following the finalisation of this Report, the SA 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 relevant 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 Braintree District Council and Colchester Borough Council.

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 LPAs. This reflects those persons or bodies who have commented on previous planning documents through consultation.

This SA has been produced suitably in advance of the start of the formal consultation period, to accompany and influence decision making within the Plan process iteratively. Notably this SA has been produced to be available to inform the relevant LPAs' Local Plan Committee meetings.

3. Setting the Scope of the SA: Sustainability Context, Baseline and Objectives

3.1 Introduction

The SA of the Section One for Local Plans set the scope for the appraisal of options and Plan content relevant to that strategic area. Although still a strategic undertaking, this SA needs to develop a framework for appraising the Colchester Braintree Borders Garden Community options that is more specifically relevant to the area in question.

That established, the Section One SA forms a good starting point for identifying any sustainability issues relevant to the Colchester Braintree Borders Garden Community, both in the scope of that SA (identified in an initial Scoping Report) and the appraisal of the Garden Community itself. In addition, Policy SP9 of Section One identifies policy criteria relevant to the Garden Community and these also assist in the identification of sustainability issues. Further, the North Essex Garden Community Charter identifies a set of more general overarching principles, which can aid the identification of sustainability objectives.

The following sub-sections outline the relevant plans and programmes and the baseline information profile for the Colchester Braintree Borders area, building on the Section One SA.

3.2 Plans and Programmes (Stage A1)

DPDs 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 DPD 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 DPD. Local supporting documents have also been included within this list as they will significantly shape policies and decisions in the three authority areas.

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 1 outlines the key documents, whilst a comprehensive description of these documents together with their relevance to the Plan is provided within Annex A.

Table 1: 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
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
North Essex Garden Communities Employment & Demographic Studies (2017)
North Essex Garden Communities Movement and Access Study – March 2017
Landscape Character Assessment (Chris Blandford Associates, September 2006)
Garden Communities Concept Feasibility Study (2016)
Technical Groups and Workshops (2016-2017)
North Essex Local Plans (Strategic) Section 1 Viability Assessment (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)
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 Sustainable Design and Construction SPD (2011)
CBC Local Air Quality Management Progress Report (2013)
2016 Air Quality Annual Status Report (ASR) - July 2016

Colchester Borough Council Landscape Strategy (2013)

Colchester Cycling Strategy SPD (2012)

Colchester Borough Green Infrastructure Strategy (2011)

3.3 Baseline Information (Stage A2)

Annex B details the complete Baseline Information profile for the area relevant to the Colchester Braintree Borders Garden Community and surrounds.

The following section outlines a summary of the key baseline information relevant to the Garden Community area and therefore the current state of the environment in the 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 broad 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.
- 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.
- 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.

3.3.2 Heath

- Braintree District Council has invested in new and enhanced leisure facilities in the District. In 2014 facilities at Braintree Sports & Health Club and at Braintree Swimming and Fitness were expanded and enhanced. Outdoor gyms have also been provided in Braintree.
- Participation in sport has seen a reduction in Colchester, and Braintree also has reduced overall since 2012-13.
- The site is in a broad area where there is little access to natural accessible greenspace (ANGSt). There is limited official public access beyond the footpath network.
- Braintree 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.
- There are no existing GP surgeries within the Garden Community area, the closest being in Coggeshall and Stanway, some 3 miles from the centre of the site.

3.3.3 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.
- In 2014/15, 73.9% in Braintree and 40.0% in Colchester of net dwelling completions, which accounts for 10 dwellings, were affordable.
- Meeting the housing needs in the Districts is an important issue. The 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.
- 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.

3.3.4 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 wider 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.

- Colchester has a similarly rich biodiversity, including 8 SSSIs, the Colne Estuary SPA, the Blackwater Estuary and Abberton Reservoir SPA. The Garden Community area contains the Marks Tey Brickpit SSSI.
- There are only a small number of important areas of deciduous woodland, which is a priority habitat, scattered throughout the site. These are mainly located north of the A12 corridor and to the immediate west boundary of the site.
- There are a number of National Nature Reserves located in the Plan Area: Blackwater Estuary, Colne Estuary, Dengie and Hamford Water.
- All 8 SSSIs 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, 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.
- In addition to designated sites, consideration should also be given to non-designated value in regards to ecology on a site-by-site basis in order to protect and enhance species and habitats, including those that are protected. This could include Greenfield sites and areas of habitat considered to enrich appreciably the habitat resource within the context of local areas, such as species-rich hedgerows, municipal parklands or individual veteran trees.
- The Appropriate Assessment undertaken for the Colchester and Braintree Local Plans concludes that the site will not have any specific impacts related to the loss of off-site impacts on Natura 2000 sites.

3.3.5 Landscapes

- Natural England's National Character Area Profile for the South Suffolk and North Essex Claylands, within which the site lies, 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.
- 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.

3.3.6 Soil Quality

- The Garden Community area is almost entirely within land that is identified as Grade 2 Agricultural Land; classed as 'very good' by Natural England.

3.3.7 Population and Social (including Education and Skills)

- The population in Braintree and Colchester are predicted to increase over Local Plan Periods,

with the highest growth rates in Colchester. 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.

- 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.
- 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. The implications of this will mean that as people live longer there will be increased pressure on services and housing for the elderly.
- 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.
- 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.

3.3.8 Air Quality and Noise

- There are no Air Quality Management Areas (AQMAs) located in or in proximity of the area of the Garden Community.
- There may however be air quality issues related to nitrogen dioxide (NO₂) and particulate emissions from vehicles travelling on the A12 and A120.
- There are four Air Quality Management Areas in Colchester, located in the following areas:
 1. 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).
 2. Area 2 - East Street and the adjoining lower end of Ipswich Road.
 3. Area 3 - Harwich Road/St Andrew's Avenue junction.
 4. Area 4 - Lucy Lane North, Stanway; Mersea Road; and Brook Street.

3.3.9 Climatic Factors

- 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 Braintree District's 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.
- 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 Braintree. The industry and commercial sector produces the smallest amount in each District at 29.7% in Braintree and 31.6% in Colchester. Transport produces the most in Braintree at 37.4%, whereas domestic emissions are higher in Colchester at 34.8%.
- Regarding CO2 emission reductions, Braintree and Colchester have a higher percentage than the Essex average at 18.7% and 18.6% respectively.
- Mean summer precipitation has a 67% likelihood of decreasing by up to 10% across the whole region by 2020 and by 2050 the south of the East of England will see decreases by up to 20%. By 2050 much of the region is expected to see a mean winter precipitation increase of between 10% and 20%.

3.3.10 Transport

- 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. This mainline bisects the site from east to west, separating the northern and southern halves of the Garden Community area. A rail station is present in the Garden Community area, at Marks Tey.
- The A12 also bisects the site from east to west, separating the northern and southern halves of the Garden Community area. The current route of the A120 also bisects the site in this manner further north.
- Planned A120 re-routing may affect the design and layout proposals of any Garden Community at this location, also affecting issues surrounding severance. Equally however, the preferred re-routing option could offer significant benefits regarding the future built form.
- The Marks Tey / Little Tey area is already connected by public transport - both bus and rail to Colchester, Braintree and other centres, including London.
- Currently it is forecast that numerous junctions in and around Braintree will be overcapacity by 2032 if no improvements to the A120 between Braintree and Marks Tey take place. This is particularly important because the lack of existing road infrastructure to the north of the site results in dependency on access from the south, putting pressure on A120, its junctions and the town centre route via the B1256.
- 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.

- 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 employment centres.
- Just 59.9% of residents in Braintree remain in the District for their work. The work destination attracting the highest proportion of Uttlesford residents was the City of London (10.9%). The next most popular destinations for employment were the neighbouring areas of Cambridge with 991 commuters (5.5%) and Harlow with 410 (2.3%).
- 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 Colchester than the regional and national figures at 43.8%. Braintree has a lower proportion of households owning 1 or more car at 40.3%.
- 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.
- Both Braintree and Colchester 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 work.

3.3.11 Water

- Water management is challenging given the combination of development growth and Essex 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 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.

- 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.
- The latest Colchester Water Cycle Study identified issues with a number of smaller ward areas within the Borough. Relevant to the Garden Community area, an issue exists at Marks Tey regarding Wastewater Treatment and water quality.
- Water bodies altered by human activity may be classified as Heavily Modified (HMWB) or Artificial (AWB) and have an objective to achieve 'good potential'. The Domsey Brook and the Roman River, both within the site, have a 'moderate' overall status. Pressures from development that could cause deterioration include:
 1. Alteration of river banks and river beds
 2. Barriers that restrict movement of, for example, fish
 3. Cumulative impacts in a particular catchment
 4. Diffuse pollution from surface water
 5. Reduced flow in rivers

3.3.12 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.
- Significant levels of flood risk have been identified along river stretches. The Roman River (Colne) exists at the site's north eastern boundary and the channel ensures that the surrounding area has land with is in Flood Risk Zones 2 and 3.
- This is also the case at the site's southern boundary associated with Domsey Brook. This brook also extends to the central area of the site from the south.

3.3.13 The Historic Environment

- 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.
- Archaeological deposits across 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.

- Colchester Borough boasts 52 Scheduled Monuments. Braintree District contains 40 Scheduled Monuments which include above and below ground features.
- A Scheduled Monument (circular brick kilns, W H Collier Brick and Tile Works, Church Lane) exists within the Marks Tey Brickpit SSSI and within the site.
- The Garden Community boundary is in close proximity to a Scheduled Monument (a Roman villa 450m south of Warren's Farm to the north).
- A number of Listed Buildings extend north of the existing A120 around the existing nursery, Mott's Farm and Knave's Farm.
- Another cluster of Listed Buildings north of the existing A120 is situated at Teybrook Farm.
- The Garden Community area contains a small number of isolated Listed Buildings within the central areas.
- Outside, but bordering the red-line boundary of the Garden Community, lies a number of Listed Buildings and a Scheduled Monument (a long mortuary enclosure and round barrow 160m south west of Frame Farm) at Feering.

3.3.14 Minerals and Waste

- The majority of local authority collected household waste is sent for recycling, composting or reuse in the Plan Area. Despite this, no non-household local authority collected waste is recycled, composted or re-used.
- 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.

3.3.15 Utilities

- Due to the nature and scale of Garden Communities, utility provision does not exist within the site currently.
- There is capacity in the medium pressure gas network in the region, but local low pressure upgrades will be required.
- Anglian Water has stated that the site is forecast to be in a deficit state by 2040. One of the main measures to mitigate the forecasted deficit will be to increase the transfer from neighbouring areas that benefit from a supply surplus.

3.3.16 Existing Communities

- The settlements of Marks Tey would be 'subsumed' by the proposed development. In addition, numerous farm buildings and other individual dwellings exist within the area.
- The 'red-line boundary' of the site extends the Garden Community area to Copford in the north east, Copford Green in the east, Easthorpe in the south, Feering in the south west and

Coggeshall in the north west.

3.3.17 Trans-national Implications

This Scoping & Environmental Report explores the state of the environment within the broad area of the Plan; 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.

In view of this, no trans-national effects are deemed likely as a result of the Plan singularly or in combination with the relevant Local Plans of Braintree and Colchester 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 principle of the Garden Community on international and national designations for nature conservation. The AA identifies that although impacts arise as a result of the level of growth resulting from Garden Communities due to recreation, effective mitigation is possible.

3.3.18 Data Limitations

Relevant information is not available for the focused Garden Community area on a particularly detailed basis on all sustainability themes. 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 Garden Community 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 November 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.

The appraisal of the Plan 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 Plan's content.

The following table outlines the thought process which has led to the formulation of the Sustainability Objectives for the Plan. The state of the environment in absence of the Plan is derived from the Baseline Information addressed in Annex B accompanying this report, the remit of the Plan in the wider planning policy context, and the wider benefits that can be expected of growth at the scale proposed in accordance with Garden City principles and the North Essex Garden Community Charter.

Table 2: Key Sustainability Issues and Problems

General theme	Description / Supporting Evidence	State of environment in absence of the plan	Sustainability Objective (SO)
Economy	<p>Due to its rural nature the site does not currently accommodate many retail uses aside from those located along the A120. It is however well located to Colchester and Tollgate via public transport means.</p> <p>The site is well located to Tollgate, which could become a preferable retail destination for new residents rather than Colchester town centre</p>	<p>Despite emerging policy in regard to ensuring services and facilities are integrated into the Garden Community existing in the form of the Strategic Section One for Braintree and Colchester's Local Plans, the Plan can ensure that sufficient retail and employment premises are integrated into any new community through an effective framework regarding the eventual form of the development. The Plan can ensure that provision can need to be planned to complement, rather than displace, existing local service provision in the town of Braintree. This may not be the case in the absence of the Plan.</p>	To ensure that new retail space is suitably provided and located within the Garden Community, with no subsequent harm to the retail function of Colchester town centre.
	<p>There are significant economic 'anchors' in the wider vicinity; however links need to be made to utilise these.</p>		To ensure that new employment complimentary uses are suitably provided and located within the Garden Community.
	<p>The site is close to the established employment centre of Colchester. The site has good access to London Stansted Airport. The continued growth in the airport's operations means that the airport itself increasingly acts as a hub which attracts a range of high level economic activities, particularly in knowledge-based sectors.</p>	<p>The growth of London Stansted Airport will also provide an opportunity for the Garden Community to capture future associated employment growth. Utilising the existing strengths of existing employment providers and centres is a key opportunity for the Garden Community. The Plan can provide this opportunity, which perhaps could not be expected to be realised through alternative development approaches.</p>	To maximise existing linkages and strengths in the local economy.
	<p>Jobs 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 (The North Essex Garden Communities</p>	<p>The planning of the Garden Community provides a unique opportunity to deliver truly innovative forms of emerging utility-related technologies, including but not limited to state of the art telecommunications infrastructure which could provide an ultra-fast broadband</p>	To ensure the design of new development is capable of maximising innovative forms of emerging utility-

General theme	Description / Supporting Evidence	State of environment in absence of the plan	Sustainability Objective (SO)
	Employment & Demographic Studies (SQW / Cambridge Econometrics 2017)).	service for existing and future residents. This could otherwise not be forthcoming within the Garden Community in the absence of the Plan.	related technologies.
Health	Access to natural greenspace (ANGSt) is an issue within the wider areas of Braintree and Colchester, and particularly within the Garden Community area.	The Plan has the opportunity to suitably include accessible natural green space throughout the design and layout of the Garden Community. This might not be the case in the absence of a plan-led approach, or otherwise not be given due weight in favour of marketable land uses.	To ensure sufficient accessible natural green space throughout the Garden Community to benefit the new community and the surrounding rural areas.
	There are no existing GP surgeries within the Garden Community area, the closest being in Coggeshall and Stanway, some 3 miles from the centre of the site.	In facilitating inclusive facilities, the Plan can ensure that a new Garden Community can incorporate premises for a local centre, including doctors' surgeries and sports provision. In the absence of the Plan it can not be certain whether this would be forthcoming through more traditional delivery models and a possible lack of liaison with service providers.	To ensure that a range of services and facilities are included and suitably located within the Garden Community to maximise social inclusivity and to ensure sustainable land use patterns that maximise accessibility between jobs, homes, services and facilities.
	The proportion of adults participating in 30 minutes, moderate intensity sport has decreased in recent surveys at local, sub-national and national levels.		
Housing	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.	The Plan is committed to ensuring varied housing tenures, ensuring affordability and ownership models. This can not be considered as forthcoming through development that is not plan-led, where it is likely that outcomes are sought that are most profitable.	To ensure a mix of housing types and tenures with as high a proportion of affordable units as possible.

General theme	Description / Supporting Evidence	State of environment in absence of the plan	Sustainability Objective (SO)
	The 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.	A plan-led Garden Community can enable large scale development that is sustainable. The scale of development, established within the Strategic Section One of Braintree's Local Plan and similarly established in the emerging Uttlesford Local Plan, ensures that a larger amount of affordable units can be delivered without affecting viability. Whereas a higher percentage can not be ensured through the Plan, instead being subject to exploration within the Local Plans the Plan can ensure that affordable units are appropriately located within the development. This can be considered comparatively unlikely to be forthcoming without a plan led approach.	
Biodiversity	There are only a small number of important areas of deciduous woodland, which is a priority habitat, scattered throughout the site. These are mainly located north of the A12 corridor and to the immediate west boundary of the site.	A plan-led approach to strategic development can ensure that existing features of biodiversity are protected and integrated into the Garden Community's green infrastructure. Comparatively, this is unlikely to be the case through more traditional strategic development approaches.	To protect and enhance existing features of biodiversity through green corridors and ensure links between new habitats within the Garden Community and those that exist over a wider area.
	The Garden Community area contains the Marks Tey Brickpit SSSI towards the eastern boundary.		
	As identified within the HRA / AA of the Strategic Section One (and Two) of Braintree's emerging Local Plan, a Recreational Avoidance and Mitigation Strategy will be needed to ensure that the level of growth does not have likely significant effects on Natura 2000	The relationship between areas of biodiversity interest and human activity through recreation are often incompatible in terms of wildlife conservation. A plan led approach can ensure that such management and the identification of land for recreational purposes is ensured.	To ensure that recreational activity does not have negative effects on wildlife conservation and protection in the wider area.

General theme	Description / Supporting Evidence	State of environment in absence of the plan	Sustainability Objective (SO)
	sites within the wider area.		
Landscape	Natural England's National Character Area Profile for the South Suffolk and North Essex Claylands, within which the site lies, 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.	A plan-led Garden Community can ensure that sensitive natural features are integrated, protected and enhanced through a framework approach to design and layout. This is not unique to Garden Communities and can be expected to be ensured through more traditional approaches to development.	To ensure the protection, enhancement and creation of features of a landscape value throughout the Garden Community.
	The northern part of wide area has implications associated with the Blackwater River Valley Landscape Character Area which is more sensitive to views.		
	There are a number of sensitive receptors associated with the surrounding area and large scale development has the potential to impact on the rural character of the small settlements surrounding and within the site.	A plan-led Garden Community, adhering to Garden City principles and the Garden Community Charter, can ensure better integration of development within the open countryside. This would otherwise be unlikely to be the case through more traditional development approaches.	To ensure that the Garden Community is integrated into the existing rural landscape.
Soil quality	The Garden Community area is almost entirely within land that is identified as Grade 2 Agricultural Land; classed as 'very good' by Natural England.	The loss of agricultural land is inevitable through any strategic scale development. In the absence of the Plan, it can be considered that there would be a similar loss of such land.	To minimise the loss of the best and most versatile agricultural land.
Education and skills	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.	A plan led approach enables an 'infrastructure first' approach to delivering the Garden Community, through effective working with the	To ensure the delivery of new schools and other infrastructure to

General theme	Description / Supporting Evidence	State of environment in absence of the plan	Sustainability Objective (SO)
	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.	commissioning authority. It is more likely that a less holistic approach to ensuring adequate school capacity would be forthcoming in the absence of the Plan.	support the Garden Community.
Energy consumption	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 Braintree District's 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.	The Garden Community offers a significant opportunity for the utilisation of renewable energy sources to be utilised. The Plan can ensure that renewable energy generation and energy efficiency measures are included within the development that would otherwise be unlikely to be integrated in its absence.	To embrace sustainable forms of energy production and distribution.
	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 Braintree. The industry and commercial sector produces the smallest amount in each District at 29.7% in Braintree and 31.6% in Colchester. Transport produces the most in Braintree at 37.4%, whereas domestic emissions are higher in Colchester at 34.8%.		
Transport and Access	Both Braintree and Colchester registered significant proportions of residents travelling outside to other local authority areas to find	A plan-led approach, together with the delivery model of the Garden Community, can ensure that effective improvements can be made to rail	To maximise sustainable transport modes on site, minimise

General theme	Description / Supporting Evidence	State of environment in absence of the plan	Sustainability Objective (SO)
	employment. Just 59.9% of residents in Braintree remained in the District for work.	services. It is unlikely that this would be ensured through any planning application without such a requirement either physically or through sufficient contributions.	vehicle emissions and to ensure effective links to existing off-site public transport services and interchanges.
	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.	It is considered that the Plan can ensure an appropriate level of services and facilities on-site. This can ensure that residents take fewer trips outside the Garden Community for convenience shopping and day to day needs. This can offset traffic implications on existing roads as much as possible. It is thought that without this requirement established within the Plan, planning applications are unlikely to ensure provision to the same level.	To ensure that a range of services and facilities are included and suitably located within the Garden Community to maximise social inclusivity and to ensure safe, sustainable land use patterns that maximise accessibility between jobs, homes, services and facilities.
	Planned A120 re-routing may affect the design and layout proposals of any Garden Community at this location, also affecting issues surrounding severance. Equally however, the preferred re-routing option could offer significant benefits regarding the future built form.	The issues of bisection surrounding the site can affect permeability. Development at the scale proposed can ensure that such issues are overcome and solutions become viable. These are best consulted on and ensured through a plan-led system. This can not be expected in the absence of the Plan	To ensure suitable and permeable access to and within the site, minimising the impacts of separation associated with the Great Eastern Main Line and A-roads on site and to ensure appropriate linkages to the existing road network.
	The mainline bisects the site from east to west, separating the northern and southern halves of the Garden Community area. The		

General theme	Description / Supporting Evidence	State of environment in absence of the plan	Sustainability Objective (SO)
	A12 also bisects the site from east to west, separating the northern and southern halves of the Garden Community area. The current route of the A120 also bisects the site in this manner further north.		
	Proportionately more households own 1 car or van within Colchester than the regional and national figures at 43.8%. Braintree has a lower proportion of households owning 1 or more car at 40.3% however this is still above the regional average.	The Plan can ensure a level of car parking, and design in such parking, that is suitable for the number of homes. The requirements are unlikely to be clear and specifically suitable to the wider design requirements of the Garden Community in the absence of the Plan.	To ensure an appropriate level of car parking.
Sustainable Transport	Both Braintree and Colchester 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 work.	A plan-led approach, together with the delivery model of the Garden Community, can ensure that effective links and improvements can be made to rail and bus services within the wider area. It is unlikely that this would be ensured through any planning application without such a requirement either physically or through sufficient contributions.	To ensure suitable public transport improvements and maximise the use of sustainable transport modes on site.
	Regarding public transport, the direct access of the site to rail links, the A12 and the A120 can be considered advantageous in terms of connecting the site with North Essex inter-urban bus routes, providing connectivity employment centres.		
Water	Opportunities for improving the status of water bodies should be identified as part of development proposals. Typical water body improvements might be creating 'natural' river banks, overcoming	As stated in the Plan, substantial investment in this essential area of infrastructure will be required to facilitate the improvements needed and ensure adequate ongoing maintenance. It is uncertain whether this infrastructure	To ensure that there is no deterioration in water quality as a result of development.

General theme	Description / Supporting Evidence	State of environment in absence of the plan	Sustainability Objective (SO)
	<p>barriers to fish movement or providing sustainable drainage systems.</p> <p>The latest Colchester Water Cycle Study identified issues with a number of smaller ward areas within the Borough. Relevant to the Garden Community area, an issue exists at Marks Tey regarding Wastewater Treatment and water quality.</p> <p>Water bodies altered by human activity may be classified as Heavily Modified (HMWB) or Artificial (AWB) and have an objective to achieve 'good potential'. The Domsey Brook and the Roman River, both within the site, have a 'moderate' overall status. Pressures from development that could cause deterioration include:</p> <ol style="list-style-type: none"> 1.Alteration of river banks and river beds 2.Barriers that restrict movement of, for example, fish 3.Cumulative impacts in a particular catchment 4.Diffuse pollution from surface water 5.Reduced flow in rivers 	would be forthcoming from development proposals in the absence of the Plan.	
Flood Risk	Significant levels of flood risk have been identified along river stretches. The Roman River exists at the site's north eastern boundary and the channel ensures that the surrounding area has land with is	In the absence of the Plan there is unlikely to be any significant difference in how areas of flood risk are considered within the Garden Community. That said, the design and layout of the Garden Community can ensure that	To ensure that there is no increase in fluvial or surface water flood risk as a result of development, with

General theme	Description / Supporting Evidence	State of environment in absence of the plan	Sustainability Objective (SO)
	in Flood Risk Zones 2 and 3. This is also the case at the site's southern boundary associated with Domsey Brook. This brook also extends to the central area of the site from the south.	<p>existing water courses are maximised as features of a blue infrastructure interest throughout the site.</p> <p>The delivery of the Garden Community will provide an opportunity to provide this level of investment and also provide an unprecedented opportunity to integrate innovative sustainable urban drainage systems into the design of new development. It is unlikely that this would be the case to the same degree through development proposals in the absence of the Plan.</p>	positive outcomes sought in regards to biodiversity gain and blue infrastructure networks through SuDS.
The Historic Environment	<p>A Scheduled Monument (circular brick kilns, W H Collier Brick and Tile Works, Church Lane) exists within the Marks Tey Brickpit SSSI and within the site. The Garden Community boundary is in close proximity to a Scheduled Monument (a Roman villa 450m south of Warren's Farm to the north). Outside, but bordering the red-line boundary of the Garden Community, lies a number of Listed Buildings and a Scheduled Monument (a long mortuary enclosure and round barrow 160m south west of Frame Farm) at Feering.</p> <p>A number of Listed Buildings extend north of the existing A120 around the existing nursery, Mott's Farm and Knave's Farm. Another cluster of Listed Buildings north of the existing A120 is situated at Teybrook Farm.</p>	In the absence of the Plan, such features would have to be protected through suitable schemes both in regard to designations and their settings. The Plan can further ensure that enhancements to assets are sought where possible.	To protect, and where possible, enhance designated and non-designated heritage assets and their settings both above and below ground.

General theme	Description / Supporting Evidence	State of environment in absence of the plan	Sustainability Objective (SO)
Utilities	Due to the nature and scale of Garden Communities, utility provision does not exist within the site currently.	The development of a new Garden Community provides significant opportunities to not only provide new infrastructure but also the opportunity to deliver innovative forms of infrastructure and ensure their integration from the outset, reducing and avoiding the need for disruptive retrofitting which could otherwise be the case in the absence of the Plan.	To ensure suitable and innovative utility provision, including high-speed and broadband.
	There is capacity in the medium pressure gas network in the region, but local low pressure upgrades will be required.		
	Anglian Water has stated that the site is forecast to be in a deficit state by 2040. One of the main measures to mitigate the forecasted deficit will be to increase the transfer from neighbouring areas that benefit from a supply surplus.	The creation of a new settlement offers an opportunity to design these improvements in such a way as to make them as efficient (in terms of operation and maintenance) and as complementary to surrounding land uses as possible. To ensure the success of this integration, strong collaboration with service providers will be required. This can be considered to be maximised through a plan-led approach, the absence of which would have less positive outcomes through the absence of such a framework regarding place making.	
	Broadband provision is integral to the Garden Community's target of 'one job per home' through effective home working.		
Existing communities	The settlements of Marks Tey would be 'subsumed' by the proposed development. In addition, numerous farm buildings and other individual dwellings exist within the area.	The proximity of existing villages to the Garden Community opens up opportunities to improve areas between these existing settlements and new development. Existing private farmland, for example, could be opened up as publicly accessible parkland with new green links formed to improve walking and cycling connectivity in the area for both existing and future residents. It can be considered comparably less likely that such a joined up approach to development would be forthcoming in the absence of the Plan and the reliance on Policy SP9 within the LPAs' emerging	To improve areas between existing settlements and new development, to repair the severance of existing communities, especially Marks Tey and to ensure that there is no coalescence with existing settlements.
	The 'red-line boundary' of the site extends the Garden Community area to Copford in the north east, Copford Green in the east, Easthorpe in the south, Feering in the south west and Coggeshall in		

General theme	Description / Supporting Evidence	State of environment in absence of the plan	Sustainability Objective (SO)
	the north west.	Local Plans.	
	Due to the nature and scale of Garden Communities, few local facilities exist within the site currently.	Despite emerging policy in regard to ensuring services and facilities are integrated into the Garden Community existing in the form of the Strategic Section One for Braintree and Colchester's Local Plans, the Plan can ensure that sufficient retail and employment premises are integrated into any new community through an effective framework regarding the eventual form of the development. The Plan can ensure that provision can need to be planned to complement, rather than displace, existing local service provision in local town centres. This may not be the case in the absence of the Plan.	To ensure that a range of services and facilities are included and suitably located within the Garden Community to maximise social inclusivity.

The following table explores whether the identified Sustainability Objectives above fall into the three broad categories of sustainability, namely social, environmental and economic themes.

Table 3: The SA Objectives

SA Objective	Economic	Social	Environmental
1) To ensure that new employment and complimentary uses are suitably provided and located within the Garden Community.	✓		
2) To ensure that new retail space is suitably provided and located within the Garden Community, with no subsequent harm to the retail function of Colchester town centre.	✓		
3) To maximise existing linkages and strengths in the local economy.	✓		
4) To minimise the loss of the best and most versatile agricultural land.	✓		
5) To ensure sufficient accessible natural green space throughout the Garden Community to benefit the new community and the surrounding rural areas.		✓	
6) To improve areas between existing settlements and new development, to repair the severance of existing communities, especially Marks Tey and to ensure that there is no coalescence with existing settlements.		✓	
7) To ensure that a range of services and facilities are included and suitably located within the Garden Community to maximise social inclusivity and to ensure sustainable land use patterns that maximise accessibility between jobs, homes, services and facilities		✓	
8) To ensure a mix of housing types and tenures with as high a proportion of affordable units as possible.		✓	
9) To ensure the delivery of new schools and other infrastructure to support the Garden Community.		✓	
10) To ensure suitable public transport improvements and maximise sustainable transport modes on site, minimise vehicle emissions, and to ensure effective links to existing off-site public transport services and interchanges.		✓	
11) To ensure suitable and permeable access to and within the site, minimising the impacts of separation associated with the Great Eastern Main Line and A-roads on site and to ensure appropriate linkages to the existing road network.		✓	

SA Objective	Economic	Social	Environmental
12) To ensure an appropriate level of car parking.		✓	
13) To ensure suitable and innovative utility provision, including high-speed and broadband and to ensure the design of new development is capable of maximising innovative forms of emerging utility-related technologies.			✓
14) To protect and enhance existing features of biodiversity through green corridors and ensure links between new habitats within the Garden Community and those that exist over a wider area.			✓
15) To ensure that recreational activity does not have negative effects on wildlife conservation and protection in the wider area.			✓
16) To ensure the protection, enhancement and creation of features of a landscape value throughout the Garden Community.			✓
17) To ensure that the Garden Community is integrated into the existing rural landscape.			✓
18) To embrace sustainable forms of energy production and distribution.			✓
19) To ensure that there is no deterioration in water quality as a result of development.			✓
20) To ensure that there is no increase in fluvial or surface water flood risk as a result of development, with positive outcomes sought in regards to biodiversity gain and blue infrastructure networks through SuDS.			✓
21) To protect, and where possible, enhance designated and non-designated heritage assets and their settings both above and below ground.			✓

3.4.1 The Compatibility of the SA Objectives

A total of 21 SA Objectives have been derived for the appraisal of the Plan. They are based on the scope of the document, policy advice and guidance and to the assessment of the current state of the environment.

It is useful to test the compatibility of SA Objectives against one another in order to highlight any areas where potential conflict or tensions may arise.

It is to be expected that some objectives are not compatible with other objectives thereby indicating that tensions could occur. Objectives which are based around environmental issues sometimes conflict with economic and social objectives, and vice versa.

Areas of potential incompatibility or uncertainty between the objectives relevant to the Plan are explained within the following bullet points:

- **Protecting soil quality and the majority of the economic and social based objectives:**
There can be expected to be unavoidable harm in regard to minimising the loss of the best and most versatile agricultural land with all other objectives relevant to build development within the Garden Community. The site is within Grade 2 Agricultural Land, which represents the best and most versatile agricultural land within both Braintree District and Colchester Borough. It should be acknowledged however that the majority of Greenfield land within the authority areas is comprised of this agricultural classification and the loss can not be considered significant in view of proportional loss.
- **Sustainable transport and the need to ensure road access and car parking:** The integration of sustainable transport modes and necessary infrastructure, and the promotion of their uptake, can be seen as potentially incompatible with the needs of ensuring appropriate linkages to the existing road network. Similarly, the impacts of poorly designed and insufficient car parking can be significant negative from both design and safety aspects. Although truly sustainable outcomes can be seen to correspond to a modal shift to sustainable transport methods, notions of inclusivity determine that safe and efficient road access need to also be ensured to reflect the baseline of car ownership and the reality that sustainable transport modes can not be considered suitable for all demographics. An effective balance of private and public transport accessibility should be considered the most realistic outcome for the Garden Community.
- **Landscape based objectives with those associated with recreation and wildlife conservation / enhancement:** Although similar in form, it must be noted that the inclusion of recreational land should largely be provided in isolation from those areas that have been identified as contributing to green infrastructure. Similarly, land for purely landscape purposes should be managed in a way that offers either recreational or biodiversity value. The impacts of recreational activity on biodiversity and wildlife conservation can be significantly damaging to habitats.

3.5 The Approach to Assessing the Colchester Braintree Borders Garden Community Plan

3.5.1 Introduction

As previously set out, the Plan will include specific proposals, strategies and detailed policies to inform the delivery of the Colchester Braintree Borders Garden Community. At this Issues and Options stage, these proposals, strategies and policies are at an early stage of development but will be refined during the Plan-making process. The final Plan will provide certainty for stakeholders on the type, scale and location of specific land uses including the infrastructure required to accommodate them.

The SA, in line with the scope of the Plan, is required to assess the impacts of the Plan's content. For this purpose, and as required of SA, a broad sustainability framework relevant to the geographical scope of the Garden Community has been devised. The sustainability framework takes the Sustainability Objectives identified previously in this report as a starting point, and elaborates on each objective in turn with a series of criteria or 'key questions' to aid the assessment of the Plan's content in more detail.

3.5.2 The Sustainability Framework for Assessing Options

The following sustainability framework forms the basis of the methods used to evaluate the effects of the Plan. Quantitative analysis is used where available; however a number of assumptions are required in order to make qualitative and comparable judgements to assess options to the same level of detail. 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 options. Assumptions are set out in the relevant sections of this SA in which specific elements of the Plan are appraised.

Table 4: Sustainability Framework for Assessing the Plan

SA Objective	SA Criteria	Potential Indicators
1) To ensure that new employment and complimentary uses are suitably provided and located within the Garden Community.	<ul style="list-style-type: none"> - Will it ensure the delivery of a range of employment opportunities to support the Community? - Will it tackle employment associated deprivation? - Does it seek to 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? 	<ul style="list-style-type: none"> - Amount of floor space developed for employment, sqm - 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
2) To ensure that new retail space is suitably provided and located within the Garden Community, with no subsequent harm to the retail function of Colchester town centre.	<ul style="list-style-type: none"> - Does it seek to include a suitable level of convenience shopping? - Does it promote and enhance the viability of existing centres? - Does it seek to locate 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"> - Footfalls in Colchester town centre - Traffic flows
3) To maximise existing linkages and strengths in the local economy.	<ul style="list-style-type: none"> - Will it support business innovation, diversification, entrepreneurship and changing economies? - Will it provide complimentary employment to existing major employment areas? 	<ul style="list-style-type: none"> - Type and amount of employment uses delivered
4) To minimise the loss of the best and most versatile agricultural land.	<ul style="list-style-type: none"> - Will it seek to locate development in areas of lower soil quality or not in farming use? - Will it ensure that soil quality is not compromised? - 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"> - Loss of Grade 2 ALC (Ha). - Contaminated land brought back into beneficial use, hectares
5) To ensure sufficient accessible natural green space throughout the Garden Community to benefit the new community and the surrounding rural areas.	<ul style="list-style-type: none"> - Does it ensure that new green and open space provision is accessible to all? 	<ul style="list-style-type: none"> - Walking distances to natural greenspace over 800m
6) To improve areas between existing settlements and new development, to repair the	<ul style="list-style-type: none"> - Will landscapes and features sensitive to development be protected? - Will it lead to coalescence with 	<ul style="list-style-type: none"> - Loss of landscape features - Number of proposals permitted contrary to a desire to restrict coalescence

SA Objective	SA Criteria	Potential Indicators
severance of existing communities, especially Marks Tey and to ensure that there is no coalescence with existing settlements.	neighbouring settlements?	
7) To ensure that a range of services and facilities are included and suitably located within the Garden Community to maximise social inclusivity and to ensure sustainable land use patterns that maximise accessibility between jobs, homes, services and facilities	<ul style="list-style-type: none"> - Does it ensure a high quality and safe public realm? - Does it seek to preserve PRoWs and bridleways? - Does it seek to promote active modes? - Will services and facilities be located in strategic locations within the Garden Community? - Will it provide a mix of leisure and sports pitch provision? - Does it seek to provide facilities for young people? 	<ul style="list-style-type: none"> - New leisure and sports provision (Sqm) - Loss of bridleways / PRoWs - Traffic flows within the Garden Community
8) To ensure a mix of housing types and tenures with as high a proportion of affordable units as possible.	<ul style="list-style-type: none"> - Does it seek to provide housing for an ageing population? - Does it ensure a proportion of housing for social rent? - Does it seek to ensure a mix of dwelling types? - Does it seek to include a mix of dwelling sizes? - Does it seek to provide as high a proportion of affordable units as possible / viable? 	<ul style="list-style-type: none"> - Number of lifetime homes - Number of homes for social rent - Number of affordable units - Housing mix - Housing size (bedrooms)
9) To ensure the delivery of new schools and other infrastructure to support the Garden Community.	<ul style="list-style-type: none"> - 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 	<ul style="list-style-type: none"> - 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

SA Objective	SA Criteria	Potential Indicators
	improvements in capacity to GP services?	
10) To ensure suitable public transport improvements and maximise sustainable transport modes on site, minimise vehicle emissions, and to ensure effective links to existing off-site public transport services and interchanges.	<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? - Will it improve, or not detrimentally affect air quality along the A120? - Does it direct growth away from AQMAs? - Does it seek to improve or avoid increasing traffic flows generally? 	<ul style="list-style-type: none"> - Percentage of journeys to work by walking and cycling and percentage of journeys to work by public transport - Traffic flows
11) To ensure suitable and permeable access to and within the site, minimising the impacts of separation associated with the Great Eastern Main Line and A-roads on site and to ensure appropriate linkages to the existing road network.	<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 at key destinations / areas that witness a large amount of vehicle movements at peak times? - Would the scale of development require significant supporting transport infrastructure? - Will it provide a suitable amount of sports, recreational, leisure and open 	<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)

SA Objective	SA Criteria	Potential Indicators
	space facilities?	
12) To ensure an appropriate level of car parking.	<ul style="list-style-type: none"> - Does it seek to provide an appropriate level of car parking? - Are parking spaces of a suitable size? - Are the locations of parking spaces suitable? 	<ul style="list-style-type: none"> - Parking violations - Number of parking spaces per dwelling approved.
13) To ensure suitable and innovative utility provision, including high-speed and broadband and to ensure the design of new development is capable of maximising innovative forms of emerging utility-related technologies.	<ul style="list-style-type: none"> - Does it ensure energy efficiency measures? - Does it seek to reduce building emissions? - Does it seek to integrate renewable sources of energy? - Does it seek to ensure high speed broadband? 	<ul style="list-style-type: none"> - Code for Sustainable Homes certificates - Energy consumption per dwelling - Percentage of energy consumption from renewable sources - Broadband speeds
14) To protect and enhance existing features of biodiversity through green corridors and ensure links between new habitats within the Garden Community and those that exist over a wider area.	<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, such as LoWSs? - 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
15) To ensure that recreational activity does not have negative effects on wildlife conservation and protection in the wider area.	<ul style="list-style-type: none"> - Will recreational spaces be carefully managed and promoted? - Will habitats be suitably protected and enhanced, either physically or through careful management? 	<ul style="list-style-type: none"> - Journeys to Natura 2000 sites for recreational uses - Condition of habitats on site
16) To ensure the protection, enhancement	<ul style="list-style-type: none"> - Does it seek to create new landscape features on site? 	<ul style="list-style-type: none"> - Loss of TPOs

SA Objective	SA Criteria	Potential Indicators
and creation of features of a landscape value throughout the Garden Community.	<ul style="list-style-type: none"> - Does it seek to include public art and a high quality public realm? - Does it seek to protect and enhance existing on-site features of a landscape value? 	
17) To ensure that the Garden Community is integrated into the existing rural landscape.	<ul style="list-style-type: none"> - Does it seek to utilise current conditions and character in the wider landscape? - Will existing features be utilised as part of landscape character of newly created areas? 	<ul style="list-style-type: none"> - Presence of indigenous and non-indigenous species through ecological surveys and requirements at the planning application stage
18) To embrace sustainable forms of energy production and distribution.	<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
19) To ensure that there is no deterioration in water quality as a result of development.	<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

SA Objective	SA Criteria	Potential Indicators
20) To ensure that there is no increase in fluvial or surface water flood risk as a result of development, with positive outcomes sought in regards to biodiversity gain and blue infrastructure networks through SuDS.	<ul style="list-style-type: none"> - 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? - Does it promote the inclusion of Sustainable Drainage Systems (SuDS) in new developments and will their integration be viable? 	<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
21) To protect, and where possible, enhance designated and non-designated heritage assets and their settings both above and below ground.	<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? - 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 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

3.6 The Appraisal of the Plan's Content

The SA of the Colchester Braintree Borders Garden Community Plan 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.

The content to be included within the table responds to those 'significant effects' of the policy or element of the Plan subject to appraisal. Appraisals will also look at the following:

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

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

3.6.1 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 / issues can be rectified
--	Strong prospect of there being significant negative impacts with mitigation unlikely to be possible (pending further investigation) / further work is needed to explore whether issues can be rectified

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

3.6.2 Description of ‘Temporal Effects’

The appraisal of the Plan’s content recognises 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 / development of the Garden Community.

(M) Medium Term: middle stages of the plan period / development of the Garden Community.

(L) Long term: latter stages of the plan period (2033) / development of the Garden Community and where relevant beyond.

3.6.3 Description of ‘Secondary, Cumulative and Synergistic Effects’

In addition to those effects that may arise indirectly (secondary effects), relationships between different elements of the Plan 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. Additionally, any cumulative impacts with other plans or projects will be highlighted within the appraisal.

3.6.4 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.

At this current stage, it is envisaged that further alternatives will be identified and developed during further stages of the Plan and as a result of the (this) Issues and Options consultation. The SA process will refine what constitutes a reasonable alternative at each consultation stage, and assess reasonable alternatives as they emerge, with findings shared with the Local Planning Authorities ahead of Local plan committee meetings for consideration.

3.6.5 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. The Appraisal of the Plan's Vision and Principles

4.1 Introduction

The following sub-sections respond to an initial appraisal of each element of the Plan. This responds to an appraisal of each part of the document that could give rise to environmental, social or economic effects. In each sub-section, an appraisal of all identified reasonable alternatives, where they exist at this stage, 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 Plan are subject to assessment in this Sustainability Appraisal:

- Colchester Braintree Borders Garden Community Draft Vision;
- Theme 1: Place and Integration;
- Theme 2: Community; and
- Theme 3: Delivery.

4.2 A Vision for the Garden Community

4.2.1 Context / Justification

A Vision for Colchester Braintree Borders Garden Community will provide a mandate for its future development. It should be a shared Vision that governs all processes from design through to delivery of the development and indeed management of community assets.

It should create an identity for the new community where residents and business feel like they “belong”. It should foster a collective sense of ownership and pride in the place where people will live, work and spend their leisure time.

The Vision combines and reflects the evidence, community workshops, the Garden Communities Charter and design principles set out above. It is a good starting point from which to develop a more succinct, and shared Vision with which people can fully identify.

The Vision for the Garden Community is as follows:

Colchester Braintree Borders Garden Community Draft Vision

Colchester Braintree Borders Garden Community (CBBGC) represents a visionary approach to plan a new town for North Essex.

BEAUTY, SENSE OF PLACE, HEALTH AND WELLBEING

CBBGC will be a beautiful place with a strong sense of community and belonging. It is planned to be big enough to become a flourishing new town in its own right, complementary to Colchester and to Braintree, but with all the facilities, services and amenities needed by a new community that is town-sized, to deliver healthy and diverse new communities. It will have low-energy, high performance homes in a rich landscape setting with natural green space directly accessible to every home.

TRANSFORMING ECONOMIC PROSPECTS

A new Garden Community will be big enough to create a new focus for economic growth that will be a catalyst to transform the economic prospects and prosperity for the whole of North Essex. It will be the main location in North Essex for housing development for the next thirty years and more. It will be planned for a population of 55,000 people with jobs, schools, shops and services to meet the new residents' needs. Support will be given to local small and medium sized businesses to help promote entrepreneurship and embed local firms within the wider Colchester and Braintree economy. This might include an element of homeworking.

A COMPREHENSIVE VISION

A new place that requires a different sort of "Vision", one that considers all aspects of creating a new town in a new place. It is so much more than building houses in the countryside.

MAKING A TOWN

Standard large developments connected to existing towns are generally delivered in a single rolling programme of development by one or two developers. Creating a new Garden Community of up to 24,000 homes requires a structure of main roads and green spaces and utility services, and must be planned as defined and distinctive neighbourhoods within this framework. There is opportunity for co-ordinated development to achieve encouraging rates of delivery of homes, jobs and infrastructure.

BESPOKE INFRASTRUCTURE FIT FOR A TOWN

CBBGC will not be reliant on the capacity of existing infrastructure – schools, primary healthcare, roads, utility services, parks and open spaces, etc. The plan will include new provision under each of these headings to ensure health. Most will be built in parallel with the completion of new homes to ensure that new residents have their needs met in a timely

and coordinated way. But systems of roads and public transport and strategic open space will need to be created at timely intervals to ensure that the new Garden Community has the best possible start, and has the minimum adverse impacts on existing communities'

DEALING WITH EXISTING TRAFFIC PROBLEMS

Essex County Council has committed to leading on a feasibility study to upgrade the A120 between Braintree and the A12. It has been agreed by Essex County Council, the Department for Transport (DfT) and Highways England that the County Council will lead on the review of options through to Preferred Route status with the objective being for the scheme to be included in Highways England's Roads Investment Strategy: for the 2020/21 – 2024/25 Road Period (RIS2). The A12 widening scheme between junctions 19 and 25 is committed within the Roads Investment Strategy for the 2015/16 to 2019/20. A preferred route announcement regarding whether there will be on line or off line widening has yet to be taken but it is expected in the Winter of 2017.

OPTIMUM BENEFITS AND MINIMUM IMPACTS

There are opportunities for existing residents, they will have ready access to a much greater array of facilities and services than they have at present; the volume of strategic-through traffic on local roads will decrease; yet careful planning and implementation will mean that their immediate surroundings may not change radically or quickly.

FUTURE-PROOFING TRANSPORT AND MOBILITY

The timescales over which the Garden Community will grow and develop will need flexibility to incorporate exciting new technologies for future mobility, allowing the emerging neighbourhoods to respond to changes in patterns of travel behaviour which are constantly evolving in parallel with advances in new transport technology.

RESPECT FOR THE LANDSCAPE AND EXISTING COMMUNITIES

There will be a positive relationship between new built form, existing communities and the landscape of the surrounding countryside. A network of extensive, new and accessible green spaces will preserve views and maintain the identity of existing communities - Marks Tey, Great Tey, Little Tey, Copford, Easthorpe, Surrex.

A WHOLE BIGGER THAN THE SUM OF ITS PARTS

This network will also create identity for distinctive new neighbourhoods, each self-sustaining and designed as a complete community, and each neighbourhood complementing and adding to range of services and facilities available to the whole.

A COMPREHENSIVE GREEN NETWORK

A green network of connected walkways and cycleways that will provide attractive and safe non-vehicular access to core destinations such as the town centre, local centres, places of

employment, schools and the railway station.

PHASING WITH RESPECT FOR EXISTING RESIDENTS

The first phase of development will be planned to minimise impacts on existing communities, address pressing accessibility and environmental issues and will deliver real benefits for existing residents.

GARDEN CITY PRINCIPLES

Above all, there will be close adherence to Garden City Principles as promoted by the Town and Country Planning Association – the key to the creation of a distinctive, high quality Garden Community.

A NEW, EXCEPTIONAL PLACE

The Colchester Braintree Borders Garden Community will be an exceptional place to be born, to grow up, to make a career, to raise a family, to retire; to enjoy a rich and fulfilling life.

4.2.2 Significant and Temporal Effects

The following assessment explores whether the plan's Vision is broadly compatible with the Sustainability Objectives that have been specifically devised for the Garden Community area.

Table 5: Compatibility with the Sustainability Objectives: A Vision for the Garden Community

Sustainability Objectives (SO)		Is the Vision compatible with the Sustainability Objectives?
ECONOMIC OBJECTIVES	1) To ensure that new employment and complimentary uses are suitably provided and located within the Garden Community.	✓
	2) To ensure that new retail space is suitably provided and located within the Garden Community, with no subsequent harm to the retail function of Colchester town centre.	✓
	3) To maximise existing linkages and strengths in the local economy.	?
	4) To minimise the loss of the best and most versatile agricultural land.	x
Commentary	The Plan's Vision adheres to the majority of the 'on-site' requirements of the Garden Community as established within Policy SP9 of Section One of the emerging Local Plans of Braintree and Colchester. The Vision refers to the need for retail and employment opportunities within the	

Sustainability Objectives (SO)		Is the Vision compatible with the Sustainability Objectives?
	development. The Vision states that, 'Support will be given to local small and medium sized businesses to help promote entrepreneurship and embed local firms within the wider Colchester and Braintree economy. This might include an element of homeworking.' Uncertainty surrounds the aspiration to maximise existing linkages and strengths in the local economy in so far as this is not specifically included, however it is likely to be ensured through a number of transport related themes within the Vision. The Vision does not aspire to minimising the loss of the best and most agricultural land; however this can not be seen to be influenced through the Plan or indeed the notion of Garden Community at this location or within the wider area.	
SOCIAL OBJECTIVES	5) To ensure sufficient accessible natural green space throughout the Garden Community to benefit the new community and the surrounding rural areas.	✓
	6) To improve areas between existing settlements and new development, to repair the severance of existing communities, especially Marks Tey and to ensure that there is no coalescence with existing settlements.	✓
	7) To ensure that a range of services and facilities are included and suitably located within the Garden Community to maximise social inclusivity and to ensure sustainable land use patterns that maximise accessibility between jobs, homes, services and facilities	✓
	8) To ensure a mix of housing types and tenures with as high a proportion of affordable units as possible.	?
	9) To ensure the delivery of new schools and other infrastructure to support the Garden Community.	✓
	10) To ensure suitable public transport improvements and maximise sustainable transport modes on site, minimise vehicle emissions, and to ensure effective links to existing off-site public transport services and interchanges.	✓
	11) To ensure suitable and permeable access to and within the site, minimising the impacts of separation associated with the Great Eastern Main Line and A-roads on site and to ensure appropriate linkages to the existing road network.	✓
	12) To ensure an appropriate level of car parking.	?
	13) To ensure suitable and innovative utility provision, including high-speed and broadband and to ensure the design of new development is capable of maximising innovative forms of emerging utility-related technologies.	✓
Commentary	The Vision states that the Garden Community 'will not be reliant on the capacity of existing infrastructure – schools, primary healthcare, roads, utility services, parks and open spaces, etc.' This	

Sustainability Objectives (SO)		Is the Vision compatible with the Sustainability Objectives?
	ensures compatibility with the majority of the social Sustainability Objectives and the Plan will include new provision under all of these themes. There is compatibility with transport infrastructure, solution, and sustainable and active modes. There is no specific mention of car parking within the Vision, however reference to future-proofing transport and mobility seeks to ensure that modal shift is promoted as far as is possible. Bespoke infrastructure will also ensure further compatibility with wider notions of social sustainability. The Vision is however not explicit in aspiring to deliver a mix of housing types and tenures with as high a proportion of affordable units as possible, however the wider Plan seeks these assurances and mention of this requirement is implied through close adherence to Garden City Principles. Nevertheless the Vision could be expanded to include this aspiration.	
ENVIRONMENTAL OBJECTIVES	14) To protect and enhance existing features of biodiversity through green corridors and ensure links between new habitats within the Garden Community and those that exist over a wider area.	?
	15) To ensure that recreational activity does not have negative effects on wildlife conservation and protection in the wider area.	?
	16) To ensure the protection, enhancement and creation of features of a landscape value throughout the Garden Community.	✓
	17) To ensure that the Garden Community is integrated into the existing rural landscape.	✓
	18) To embrace sustainable forms of energy production and distribution.	?
	19) To ensure that there is no deterioration in water quality as a result of development.	?
	20) To ensure that there is no increase in fluvial or surface water flood risk as a result of development, with positive outcomes sought in regards to biodiversity gain and blue infrastructure networks through SuDS.	?
	21) To protect, and where possible, enhance designated and non-designated heritage assets and their settings both above and below ground.	?
Commentary	Strong compatibility exists between the Vision's content surrounding landscape and existing communities and relevant Sustainability Objectives. The Plan's Vision does not specifically include the aspiration of biodiversity gain, habitat creation or a green infrastructure for this purpose, or the protection of existing features. Uncertainty surrounds the compatibility of the Vision with this Sustainability Objective and also that of ensuring that recreational activity does not have negative effects on wildlife conservation and protection in the wider area. It is recommended that these aspirations of the Garden City Principles and Policy SP9 of Section One are integrated into the Plan's	

Sustainability Objectives (SO)	Is the Vision compatible with the Sustainability Objectives?
	<p>Vision. The Vision could also be expanded to reflect the possibility of renewable energy production and distribution throughout the Garden Community, as well as more specific environmental concerns regarding water quality and minimising the risk of flooding with wider landscape improvements. The Vision could also include specific reference to the historic environment in reflection of those Listed Buildings on site and those Scheduled Monuments that exist at the site's boundary.</p>

4.2.3 Alternatives Considered

The Vision can be seen as a general summary of the content of the Plan. The individual elements of the Vision are elaborated on in more detail within other elements of the document. Alternatives are explored in more detail within the assessment of these elements, presented as 'themes and principles' later within this SA, commensurate to their individual context.

4.2.4 Proposed Mitigation Measures / Recommendations

The Plan's Vision and the Sustainability Objectives are largely compatible. The Plan is not compatible with the objective to minimise the loss of the best and most versatile agricultural land, however this is no criticism of the Plan's Vision and related to the nature of Greenfield development. Uncertainty surrounds the Vision where certain objectives are not specifically covered, such as ensuring a mix of housing types and tenures, car parking, biodiversity, ensuring that recreational activity does not have negative effects on wildlife conservation, fluvial or surface water flood risk, water quality, renewable energy production and distribution and the historic environment. These elements of sustainability, specifically relevant to the area are recommended to be included within future iterations of the Plan's Vision.

4.3 Planning Themes and Principles of the Garden Community

4.3.1 Context / Justification

Section 4 of the Colchester Braintree Borders Garden Community Plan contains a number of 'themes' related to Garden Community Charter Principles. Within this SA the content of these 'themes', as outlined in the Plan, are appraised.

The Plan includes a narrative of how each Charter Principle can be met within the Garden Community, physically and in terms of how development can be shaped within the mechanisms of the Plan itself. These narratives form the basis for each thematic appraisal.

4.3.2 Theme 1: Place and Integration

This Section of the Plan relates to issues such as making good places, high quality design, planning for a healthy economy, mobility and access within and around the development, and landscape and biodiversity objectives.

The principles that form the content of this theme are as follows:

THEME 1: PLACE AND INTEGRATION

PRINCIPLE 1: GREEN INFRASTRUCTURE

The Garden Communities will provide a generous amount of green space. They will be set within a multi-functional and integrated natural environment; providing space for nature, making the communities more resilient to climate change; promoting healthy lifestyles, and creating beautiful places to live and work.

PRINCIPLE 2: INTEGRATED AND SUSTAINABLE TRANSPORT

The Garden Communities will be planned around a step change in integrated and sustainable transport system for the north Essex area, which will put walking, cycling and public transit systems at the heart of the development, and be delivered in a timely way to support the communities as they grow.

PRINCIPLE 3: EMPLOYMENT OPPORTUNITY

The Garden Communities will seek to provide access to one job per household within the new community or within a short distance by public transport. The employment function will be a key component of creating character and identity and sustainable communities.

PRINCIPLE 4: LIVING ENVIRONMENT

Community inclusiveness and walkable, sociable and vibrant neighbourhoods will be a defining characteristic of the garden communities. A diverse mix of homes responding to existing and future local needs will be provided alongside a range of community services,

including health, education, leisure and recreation, culture and shopping.

PRINCIPLE 5: SMART AND SUSTAINABLE LIVING

Planned for the 21st century, the Garden Communities will secure a smart and sustainable approach that fosters resilient environments and communities; able to respond positively to changing circumstances. Innovation and technology will be embraced to achieve resource efficiency, higher quality of life and healthier lifestyles; creating the conditions for sustainable living.

PRINCIPLE 6: GOOD DESIGN

Through all stages of the planning, design and development of the Garden Communities the highest quality of design and management of the built and public realm will be promoted. Existing local assets will be capitalised to help create distinctive places.

4.3.2.1 Significant, Secondary and Temporal Effects

Table 6: Impact on Sustainability Objectives: Theme 1 – Place and Integration

Sustainability Objectives (SO)		Impacts		
		Short Term	Medium Term	Long Term
ECONOMIC OBJECTIVES	1	++	++	++
	2	+	+	+
	3	++	++	++
	4	-	-	-
	Commentary	<p>Significant positive impacts are highlighted for Sustainability Objective 1, where the Plan identifies that the new location could provide for Grade A offices linked to a new station and attractive to financial services, the creative and digital economy related to Colchester's emerging role in this sector and the presence of the University, construction innovation, logistics and the energy sector, in particular opportunities in renewables and waste.</p> <p>Positive impacts have been highlighted regarding Sustainability Objective 2 and a need for convenience retail provision. The Plan acknowledges that the Garden Community will need to establish neighbourhoods where everything is within easy walking distance, planned around connected centres, which provide a mix of homes, jobs and services set within attractive and green environments. It adds that, 'Colchester Braintree Borders Garden Community will have a Town Centre that will be the heart of the Garden Community. It will likely contain the highest development density with a mix of employment, shopping, education needs, cultural and amenity</p>		

Sustainability Objectives (SO)	Impacts		
	Short Term	Medium Term	Long Term
	<p>and health facilities, together with the main public transport interchange. Neighbourhood centres will contain a smaller range of local services including primary schools, nurseries, health services, day-to-day convenience shopping and cafés.' Despite this, the type of retail offer within the main Garden Community centre is not yet established, and therefore the possible effects on the existing town centre of Colchester and the function of Tollgate are yet to be identified. As such, only minor positive impacts are highlighted at this stage of the Plan.</p> <p>Significant positive impacts have been identified for Sustainability Objective 3, regarding capitalising on the links to local employment opportunities and taking advantage of the site's proximity to economic hubs. The Plan recognises that the Garden Community can assist in the development of an economic corridor in the South East of England which will offer business workspace, access to labour and clusters of expertise in research (associated with the University of Essex), a logistics hub, and high quality office space for support services/back office functions. The Plan recognises the possibilities associated with the site's good access to international markets via London, and London Stansted Airport and Haven ports.</p> <p>Negative impacts have been highlighted for the loss of Grade 2 Agricultural Land, which represents the highest grade soils within the Districts of both Braintree and Colchester. Despite this, impacts are not highlighted as significant due to the prevalence of Grade 2 soils in both Districts.</p>		
SOCIAL OBJECTIVES	5	++	++
	6	++	++
	7	+	+
	8	+	+
	9	+	+
	10	++	++
	11	++	++
	12	?	?
	13	+	+
	Commentary	<p>There will be significant positive impacts regarding accessible natural green space through requirements for open space to be integrated throughout the Garden Community and also the integration of major local new parkland. Additionally, the</p>	

Sustainability Objectives (SO)	Impacts		
	Short Term	Medium Term	Long Term
	<p>Plan successfully seeks to ensure sports pitches, recreation and play areas and informal space for free play and recreation for all ages. As a result, additional positive impacts have been identified for Sustainability Objective 7 regarding accessibility to facilities in so far as is relevant to this specific theme.</p> <p>There will be significant positive impacts on Sustainability Objective 6 regarding coalescence in response to the new community, through Theme 1, addressing the relationship with existing communities close to and within its boundaries, stating that care will be needed in new development to mitigate potential adverse impacts on adjacent settlements and on the wider landscape. Similarly, Principle 2 acknowledges that specific proposals will need to reduce severance caused by the A12 and the mainline railway. Further detail is likely to be provided at later consultation stages</p> <p>There will be positive impacts on Sustainability Objective 8, regarding the provision of a mix of house types and tenures. The Plan states that, 'provision of a variety of housing tenures with levels of affordability reflected in different ownership models is an essential part of the creation of a balanced Garden Community.' This can be seen to go beyond what the market can be expected to provide, however the Plan could elaborate in future iterations how these different types of housing could be integrated within the wider design of the Garden Community, in addition to affordable units, to ensure social inclusivity.</p> <p>Significant positive impacts have been highlighted regarding Sustainability Objective 9 and the provision of schools and other supporting infrastructure. Charter Principle 4 of the Plan states that, 'Neighbourhood centres will contain a smaller range of local services including primary schools, nurseries, health services, day-to-day convenience shopping and cafés. They will be located in within 10 minutes' walk of homes.' This also ensures additional positive impacts on Sustainability Objective 7. The commentary regarding Charter Principle 4 could however elaborate on the locational requirements of secondary schools that will be forthcoming from the Garden Community development.</p> <p>The Plan's Principle 2 recognises the importance of ensuring the highest level of strategic connectivity with the wider transport system, additionally identifying that the Garden Community site has existing issues of poor connectivity and traffic congestion, transport corridors that divide existing communities and create environmental problems, particularly at peak times, and poor access to key locations such as schools, local shops and the railway station. This is not surprising, given the greenfield status of the majority of the land, which presents a 'blank canvas' for high levels of connectivity and public transport to be integrated. The Plan states that the new Garden Community should make full provision for active travel (walking and cycling) and sustainable travel (public transport) so that together they account for 70% of all trips. The Plan identifies that this could represent (in the medium to long</p>		

Sustainability Objectives (SO)		Impacts		
		Short Term	Medium Term	Long Term
ENVIRONMENTAL OBJECTIVES		<p>term), a Rapid Transit service to Colchester allied to dedicated routes and park & ride with phased construction through the new Garden Community, with the potential for a new Town Centre railway station area and a Rapid Transit system along the Stane Street / London Road corridor in the longer term.</p> <p>Significant positive impacts are also identified regarding Sustainability Objective 11, regarding access to existing roads and the provision of a suitable network of roads on site. The Plan states that ‘the aim at CBBGC is to increase capacity for journeys by providing attractive alternatives to travel by car, and to redistribute through traffic to realigned routes.’ The Plan identifies some specific possible solutions, including the realignment of the A120 in advance of development at any significant scale, connectivity by active travel modes, better accessibility for Marks Tey Station, potential to downgrade the existing Junction 25 on the A12 to reduce through traffic in Marks Tey, and potential for downgrading of the A120 within the new Garden Community to become a “community road” unattractive to through traffic.</p> <p>Charter Principle 5 identifies that the use of Smart Vehicles would make full provision for electric vehicle charging infrastructure linked to renewable energy generation while Smart Car-Sharing would use technology to make cars available for occasional use and would help manage Smart Parking. It is unsure whether this element of the Plan is suitable in response to the baseline data of car ownership in the wider area and the need for the development of ‘specific garden community parking approaches and standards that help promote the use of sustainable transport and make efficient use of land’ as identified in the emerging Colchester and Braintree Local Plan Policy SP7 - Development and Delivery of New Garden Communities in North Essex. As such, uncertain impacts are identified at this stage.</p> <p>Charter Principle 5 will ensure minor positive impacts on Sustainability Objective 13, regarding innovative utility provision. This Principle includes ‘Smart Infrastructure’ requirements, which include cutting edge digital communications, Smart Energy systems to deliver sustainable energy and capacity and adaptability for technological change. Despite this, future iterations of the Plan could include specific mention of the requirements of day to day utility provision on site, aside from those related to energy efficiency, power and digital communications.</p>		
	14	++	++	++
	15	+	+	+
	16	++	++	++
	17	++	++	++
	18	++	++	++

Sustainability Objectives (SO)	Impacts		
	Short Term	Medium Term	Long Term
19	?	?	?
20	?	?	?
21	?	?	?
Commentary	<p>Significant positive impacts have been identified for Sustainability Objective 16, where the Plan states that, ‘Habitats in and around the Domsey Brook, Roman River corridors and around Seven Star Green should be retained and enhanced. Subject to more detailed survey work, the area has the potential to support a number of protected species and other species of conservation importance.’ Regarding a desire to ensure that recreational activity does not affect wildlife conservation minor positive impacts are highlighted at this stage. Although the issue is not specifically identified in the Plan, Principle 1 alludes to the need for separate and more ‘purpose designed’ open spaces within the Garden Community. This will need to be carefully managed however to ensure no possible compromise of the status of habitats through recreational activity.</p> <p>Significant positive impacts are also identified for all landscape and coalescence based objectives. This is in response to the Plan maintaining identity between settlements and in identifying that care will be needed in new development to mitigate potential adverse impacts on adjacent settlements and on the wider landscape – in particular, woodlands and mature hedgerows and field boundaries should be retained where they form screens.</p> <p>In response to the aspirations of Sustainability Objectives 16 and 17, regarding protecting and creating landscape features on site, and also ensuring that the Garden Community is integrated within the existing rural landscape, there will be significant positive effects. This is due to the Plan ensuring a high standard of design and layout, drawing on its context and the assets within and close to its boundaries. These key assets will provide a context to form a new green-grid layout to provide an attractive setting for the new community and linking it to the wider countryside.</p> <p>There will be positive impacts associated with renewable energy and energy efficiency (Sustainability Objective 18) though Principle 5, in particular the Smart Infrastructure principles that state that future work will endeavour ensure that the Garden Community makes space for heat and power energy generation centres and hubs, maximises efficiency at the household and business level, with on-site generation, and a mixed portfolio of energy technologies to avoid dependence on any one energy solution.</p> <p>Uncertain impacts have been identified regarding Sustainability Objective 19, ensuring that there is no deterioration in water quality as a result of development, in the absence of direct mention of the potential effects of development on existing</p>		

Sustainability Objectives (SO)	Impacts		
	Short Term	Medium Term	Long Term
	<p>water courses of the Roman River and Domsey Brook in Theme 1. Nevertheless, indirect positive implications can be expected through the enhancement and active management of the vegetation in and around water courses and through reinstating the natural route of the water course.</p> <p>Uncertain impacts are also highlighted for flood risk (Sustainability Objective 20). Fluvial flood risk is not specifically mentioned within the Plan; however the retention of such areas is implied. There is mention of surface water and the integration of SuDS through the Garden Community in the Plan's Charter Principle 1. This sets out the notion of Sustainable drainage forming part of wider green links.</p> <p>The Plan recognises that a landscape framework should recognise the value of existing landscape and historic features and their ability to absorb and shape the development of a new community. Despite this, the Plan does not include notions of enhancing the historic environment and the numerous designated assets within the site area. Uncertain impacts have been highlighted for Sustainability Objective 21 at this stage and it is recommended that the relationship between new built development and these assets and their settings is recognised and elaborated on in future iterations of the Plan, with enhancement sought.</p>		

4.3.2.2 Alternatives Considered

The Theme at this stage relates to practical ways in which the Garden Community could meet the requirements of related Garden Community Charter principles. As such, it would be premature to indicate which measures should and would be more suitable for integration on site at this early stage in the plan-making process and prior to any formal public consultation. In the absence of any firm details within the Plan, no alternative approaches can be identified for appraisal at this stage.

4.3.2.3 Proposed Mitigation Measures / Recommendations

- The type of retail offer within the main Garden Community centre is not yet established, and therefore the possible effects on the existing town centre of Colchester and the function of Tollgate are yet to be identified. It is recommended that the type of shopping (convenience / comparison) is included within the Plan in order to identify any broad implications.
- The Plan could elaborate in future iterations how different types of housing could be integrated within the wider design of the Garden Community, in addition to affordable units, to ensure social inclusivity.
- The commentary regarding Charter Principle 4 could elaborate on the locational requirements of secondary schools that will be forthcoming from the Garden Community development.
- Charter Principle 5 identifies that the use of Smart Vehicles would make full provision for electric vehicles charging infrastructure linked to renewable energy generation while Smart Car-Sharing would use technology to make cars available for occasional use and would help manage Smart Parking. It is unsure whether this element of the Plan is suitable in response to the baseline data

of car ownership in the wider area and the need for the development of 'specific garden community parking approaches and standards that help promote the use of sustainable transport and make efficient use of land' as identified in the emerging Colchester and Braintree Local Plan Policy SP7 - Development and Delivery of New Garden Communities in North Essex. It is recommended that more detail on parking requirements is included within future iterations of the Plan.

- Future iterations of the Plan could include specific mention of the requirements of day to day utility provision on site, aside from those related to energy efficiency, power and digital communications.
- Uncertain impacts have been identified regarding Sustainability Objective 19, ensuring that there is no deterioration in water quality as a result of development, in the absence of direct mention of the potential effects of development on existing water courses of the Roman River and Domsey Brook in Theme 1. It is recommended that measures to ensure that water quality does not deteriorate are included within the Plan.
- It is recommended that text as to specific areas of biodiversity creation and the enhancement of existing features is included within future iterations of the Plan.
- Fluvial flood risk is not specifically mentioned within the Plan, and it is recommended that ways to ensure areas of flood risk are factored into the wider landscape design of the Garden Community are included within future iterations of the Plan.
- The Plan does not include notions of enhancing the historic environment and the numerous designated assets within the site area. It is recommended that the relationship between new built development and these assets and their settings is recognised and elaborated on in future iterations of the Plan, with enhancement sought.

4.3.3 Theme 2: Community

This Section of the Plan relates to issues such as creating identity in a new community, engaging with future residents and businesses, existing and surrounding communities and local and public bodies and ownership and maintenance of community assets.

The principles that form the content of this theme are as follows:

THEME 2: COMMUNITY

PRINCIPLE 7: COMMUNITY ENGAGEMENT

The Garden Communities are a locally-led initiative, and their development will be shaped through engaging existing communities and emerging new communities; residents will be empowered to contribute to shaping the future of north Essex.

PRINCIPLE 8: ACTIVE LOCAL STEWARDSHIP

The Garden Communities will be developed and managed in perpetuity with the direct involvement of their residents and businesses; residents will be directly engaged in the long term management and stewardship, fostering a shared sense of ownership and identity.

4.3.3.1 Significant, Secondary and Temporal Effects

Table 7: Impact on Sustainability Objectives: Theme 2 - Community

Sustainability Objectives (SO)		Impacts		
		Short Term	Medium Term	Long Term
ECONOMIC OBJECTIVES	1	0	0	0
	2	0	0	0
	3	0	0	0
	4	0	0	0
	Commentary	There will be no impacts on the economic Sustainability Objectives as a direct result of this Theme.		
SOCIAL OBJECTIVES	5	+	+	+
	6	0	0	0
	7	+	+	+
	8	0	0	0

Sustainability Objectives (SO)	Impacts		
	Short Term	Medium Term	Long Term
9	0	0	0
10	0	0	0
11	0	0	0
12	0	0	0
13	0	0	0
Commentary	There will be positive implications regarding those Sustainability Objectives related to open space management and ensuring an appropriate and desirable level of services and facilities, through effective community engagement and active stewardship once the Garden Community has been delivered.		
ENVIRONMENTAL OBJECTIVES	14	+	+
	15	+	+
	16	+	+
	17	0	0
	18	0	0
	19	0	0
	20	+	+
	21	0	0
Commentary	The Plan asks a consultation question within Charter Principle 8 that asks consideration of the best way to manage community assets such as parks, sports pitches, allotments, community buildings and schools and community transport. This can ensure positive impacts related to the maintenance of habitats, green and blue infrastructure (including indirectly those created through SuDS) and ensuring these are protected alongside recreational areas, and landscape features.		

4.3.3.2 Alternatives Considered

The Theme at this stage relates to practical ways in which the Garden Community could meet the requirements of related Garden Community Charter principles. As such, it would be premature to indicate which measures should and would be more suitable for integration on site at this early stage in the plan-

making process and prior to any formal public consultation. In the absence of any firm details within the Plan, no alternative approaches can be identified for appraisal at this stage.

4.3.3.3 Proposed Mitigation Measures / Recommendations

No mitigation measures or recommendations are proposed at this stage.

4.3.4 Theme 3: Delivery

This Section of the Plan relates to issues such as leadership, partnership and phasing and delivery of homes together with jobs; education, leisure and community facilities; and transport and utilities infrastructure.

The principles that form the content of this theme are as follows:

THEME 3: DELIVERY

PRINCIPLE 9: STRONG CORPORATE AND POLITICAL PUBLIC LEADERSHIP

The councils of North Essex will collaborate to provide clear vision for the garden communities and commitment to their long term success. Central to this will be a commitment to high quality placemaking, timely infrastructure provision, and achieving a steady pace of housing and employment delivery.

PRINCIPLE 10: INNOVATIVE DELIVERY STRUCTURE

The Garden Communities will be delivered through a genuine and pro-active partnership approach between the public and private sectors, where risk and reward is shared and community empowerment enabled.

4.3.4.1 Significant, Secondary and Temporal Effects

Table 8: Impact on Sustainability Objectives: Theme 3 - Delivery

Sustainability Objectives (SO)		Impacts		
		Short Term	Medium Term	Long Term
ECONOMIC OBJECTIVES	1	+	+	+
	2	+	+	+
	3	+	+	+
	4	0	0	0
	Commentary	Theme 3 will ensure, indirectly, that the majority of the economic Sustainability Objectives will be met with positive outcomes. The Plan states that there is a '...desire of the public sector, represented by the partnership of four local Councils		

Sustainability Objectives (SO)		Impacts		
		Short Term	Medium Term	Long Term
		and representing the interests of the wider North Essex communities, to play a full and active role in the development of the three Garden Communities, and to participate in both the risks and the rewards of development, securing benefits for the wider communities.' With a preference for the formation of local Development Corporations to prepare masterplans and other guidance, the Plan and Council's aspire to offer truly sustainable outcomes.		
SOCIAL OBJECTIVES	5	+	+	+
	6	+	+	+
	7	+	+	+
	8	+	+	+
	9	+	+	+
	10	+	+	+
	11	+	+	+
	12	+	+	+
	13	+	+	+
	Commentary	Theme 3 will ensure, indirectly, that the majority of the social Sustainability Objectives will be met with positive outcomes. The Plan states that there is a '...desire of the public sector, represented by the partnership of four local Councils and representing the interests of the wider North Essex communities, to play a full and active role in the development of the three Garden Communities, and to participate in both the risks and the rewards of development, securing benefits for the wider communities.' With a preference for the formation of local Development Corporations to prepare masterplans and other guidance, the Plan and Council's aspire to offer truly sustainable outcomes.		
ENVIRONMENTAL OBJECTIVES	14	+	+	+
	15	+	+	+
	16	+	+	+
	17	+	+	+

Sustainability Objectives (SO)	Impacts		
	Short Term	Medium Term	Long Term
18	+	+	+
19	+	+	+
20	+	+	+
21	+	+	+
Commentary	Theme 3 will ensure, indirectly, that the majority of the environmental Sustainability Objectives will be met with positive outcomes. The Plan states that there is a '...desire of the public sector, represented by the partnership of four local Councils and representing the interests of the wider North Essex communities, to play a full and active role in the development of the three Garden Communities, and to participate in both the risks and the rewards of development, securing benefits for the wider communities.' With a preference for the formation of local Development Corporations to prepare masterplans and other guidance, the Plan and Council's aspire to offer truly sustainable outcomes. Uncertain impacts regarding Sustainability Objective 9 reflect the absence of provision elsewhere in the Plan's Themes.		

4.3.4.2 Alternatives Considered

The Theme at this stage relates to practical ways in which the Garden Community could meet the requirements of related Garden Community Charter principles. As such, it would be premature to indicate which measures should and would be more suitable for integration on site at this early stage in the plan-making process and prior to any formal public consultation. In the absence of any firm details within the Plan, no alternative approaches can be identified for appraisal at this stage.

It should be noted however that the Strategic Section One for Braintree and Colchester's emerging Local Plans establishes and assesses alternatives relevant to the principle of the Garden Community delivery model in comparison to more traditional approaches to growth.

4.3.4.3 Proposed Mitigation Measures / Recommendations

No mitigation measures or recommendations are proposed at this stage.

5. The Plan's Development Concept Options

5.1 The Identification of Options for Assessment

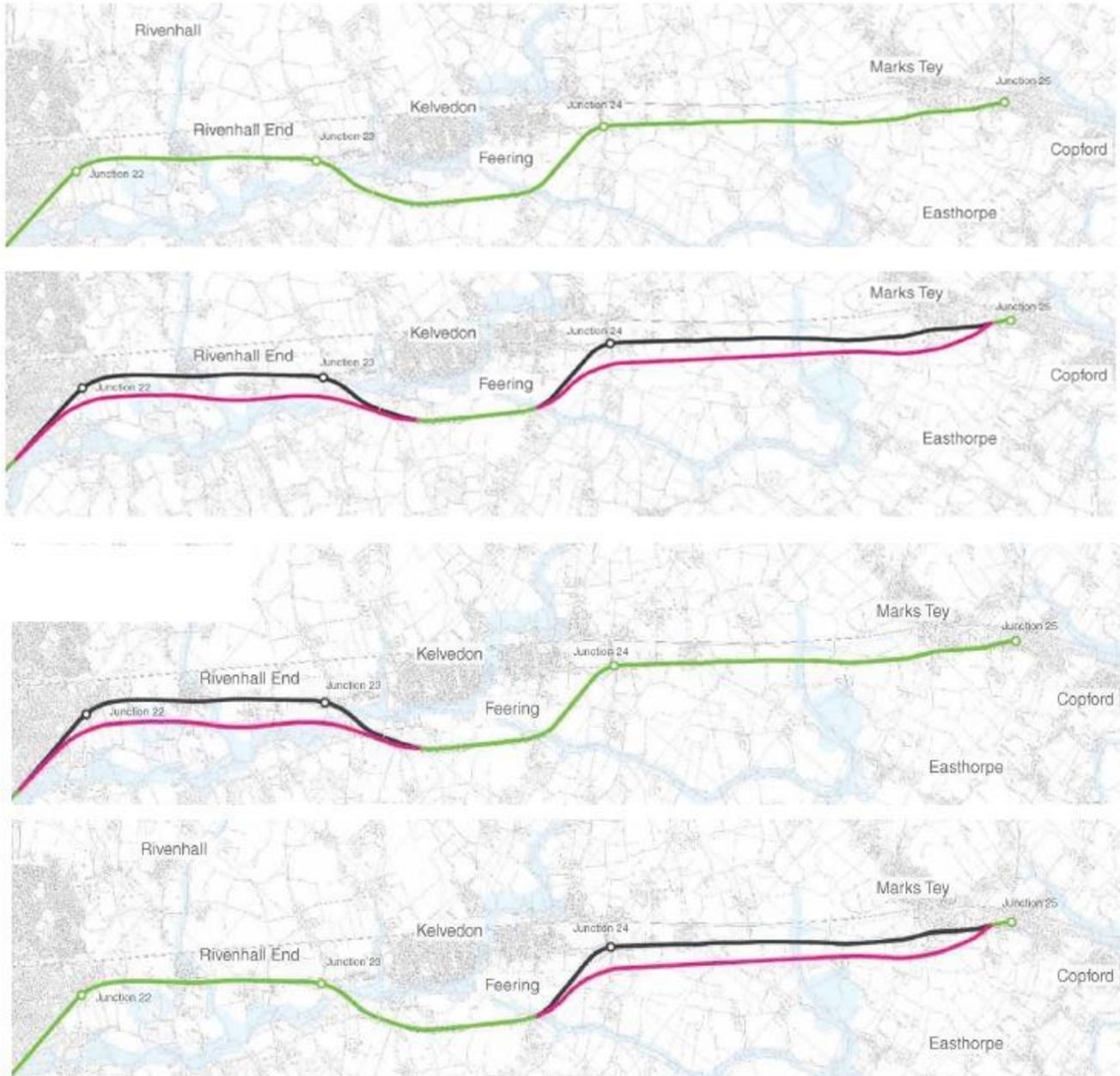
The Plan states that, 'The area of land that could accommodate a new Garden Community at Colchester Braintree Borders has been refined from options presented in the "Options and Evaluation" work undertaken by AECOM in July 2016 and influenced by stakeholder consultation with local community representatives in November 2016 and April 2017, as well as an understanding of the issues and the interrelationship between them which include:

- identification of clear and defensible boundaries (water courses, roads, woodland belts);
- appreciation of distance and separation of communities – (physical, visual, perceived);
- relationship to existing settlements;
- nature of land that will perform the role of a "green buffer" which will define an envelope within which a new community can be accommodated that remains distinct from other existing settlements;
- planning policy protection (how might this land be protected "in perpetuity" from built development whilst allowing complementary activities that support both the new community and existing communities?).

At this stage the range in development scale (15,000-24,000 homes) as referred to in the draft Strategic Section1 Local Plan Policy SP9, limits the extent to which boundaries can be fixed. The boundaries of development will be further refined in the Development Plan Document that follows this exploration of Issues and Options.'

5.1.1 A12 Chelmsford to A120 Widening Scheme (Highways England)

Highways England has consulted on four different options to widen and potentially re-route the A12 from Chelmsford to its connection with A120 at Marks Tey. The four options are as follows:



In respect of the implications for the Garden Community, there are essentially two potential outcome of the A12 improvement scheme: An 'on-line' outcome – this would involve the widening of the existing A12 (the 1st and 3rd Options above); and an 'off-line' outcome – this would see the A12 re-routed further south of its existing route (the 2nd and 4th Options above).

Both outcomes would result in the A12 passing through the Garden Community as it is presented in the Plan's Development Concept. As a result, the Plan proposes an off-line alignment further south still from those presented in the 2nd and 4th Options above. This is in order to bypass the Garden Community. Highways England have postponed their Preferred Route Announcement to take account of its relationship with the Garden Community's proposed location.

5.1.2 The Options Identified for Appraisal in this SA

For the purposes of this SA, Highways England consultation options, which would all result in a widened / re-routed A12 passing through the Garden Community, provide a reasonable alternative to the Plan's Development Concept.

Two options have therefore been appraised within this SA as follows:

- SA Option 1: The Plan's Development Concept which includes a more southerly aligned A12, bypassing the entire Garden Community - within the Plan this option represents the 'Current Development Concept'.
- SA Option 2: An alternative option based on the A12 passing along its existing route (the 1st and 3rd Options above), or aligned to the south of its existing route but passing through the Garden Community's proposed area as per the Plan's Development Concept (the 2nd and 4th Options above) – within this SA this is referred to as an 'Alternative Option Pending Decision on Strategic Road Proposals.'

5.2 What has Sustainability Appraisals involved at this point?

Sustainability Appraisal work undertaken on the emerging Local Plans of Colchester and Braintree Councils forms a good starting point to base the assessment of the Garden Community within the Plan. The SA of the Strategic Section One of the Local Plans of Braintree District, Colchester Borough and Tendring District Councils, appraises the Colchester Braintree Borders site. The Section One SA assessed a number of options relevant to the Garden Community. These included options related to:

- A North and South of the A12 / Rail Corridor Focus
- South of A120 and North of Marks Tey Existing Settlement
- South of A120 Focus
- Maximum Land Take

That SA also explored a number of alternative Garden Community options across a wider strategic area. Therefore the scope of that appraisal was broader and sustainability objectives were devised to be relevant to assess options across the strategic area on a level playing field. Also, the boundaries for the options were only broadly identified, and further work has been undertaken to determine 'red line' boundaries for the options.

The appraisal of the Garden Community within the Local Plan had a different context. Within the Section One Local Plan, broad areas were assessed within the Local Plan context, using broad sustainability criteria relevant to Garden City principles where relevant and in consideration of broad constraints relevant to sustainability. This approach would consider the sustainability of Garden Communities as broad locations and ensure that the most sustainable locations are progressed to the benefit of the area's specific needs.

Garden Communities are by nature large Greenfield sites that can maximise sustainability benefits over a wide area. The Local Plan SAs used assumptions that their scale can seek effective mitigation and enhancements where smaller sites can not. To that extent, 'constraints' were actually considered 'benefits' for many sustainability factors and a pragmatic approach was taken to ensure both a fair appraisal and also in order to identify different impacts between options for comparison purposes.

5.3 The Appraisal of the Garden Community Development Concept Options

5.3.1 Introduction

Site specific issues at the Colchester Braintree Borders Garden Community need to be re-addressed commensurate to the level of detail and focus of the Plan for Colchester Braintree Borders. The scoping requirements of the SA are set out in earlier sections of this report, and have been devised to explore the sustainability issues that are relevant to the Colchester Braintree Borders Garden Community only.

5.3.2 The Appraisal of Options

This sub-section assesses the Garden Community boundary and content of the Development Concept that has been explored within the Plan against the Sustainability Objectives identified earlier in this report, in addition to the alternative SA Option identified (the 'Alternative Option Pending Decision on Strategic Road Proposals'). The assessment focuses on quantitative impacts where possible, with a limit on the use of qualitative judgements and assumptions in order to provide a snapshot of the sustainability of the boundary options 'on the ground'. Nevertheless, some qualitative conclusions / professional judgements are suitable to include to aid the appraisal of some of the more aspirational Sustainability Objectives at this early stage. The appraisal explores the form of the completed Development Concept as it is included within the Plan at this early stage in the plan-making process.

A more qualitative assumption based appraisal, filling in the gaps of those unaddressed Sustainability Objectives at this stage, is likely to follow in future iterations of this SA. At this stage, the conclusions section of this SA provides a 'whole plan' overview regarding adherence to the Sustainability Objectives, exploring whether these gaps are adequately covered or addressed through the Plan's thematic content and consideration of Garden Community Charter Principles.

5.3.2.1 Sustainability Objective 1) To ensure that new employment and complimentary uses are suitably provided and located within the Garden Community.

The SA explores the following issues on the site in regard to new employment uses:

- Broad distance / access to strategic road and rail network
- Distribution / access in regard to new residential areas

	SA Option 1 – 'Current Development Concept'	SA Option 2 – 'Alternative Option Pending Decision on Strategic Road Proposals.'
Impacts	++	+
Commentary	SA Option 1 has been assessed as having significant positive impacts on this Sustainability Objective. The employment areas included within the Development Concept can be seen to be in close proximity to those larger areas of residential development, and all have good strategic access to rail or road links. SA Option 2, in comparison will have minor positive	

	SA Option 1 – ‘Current Development Concept’	SA Option 2 – ‘Alternative Option Pending Decision on Strategic Road Proposals.’
	impacts. Whereas employment areas are all likely to be within easy access of rail and strategic road networks, it is possible that these would represent a more suitable land use than residential in close proximity to the A12. Residential uses can be expected to experience some level of noise from traffic or otherwise be compromised by mitigation measures whereas employment uses are broadly less sensitive. As a result, the impacts of SA Option 2 are less positive than SA Option 1, which locates employment uses in relation to residential development within the Garden Community, and can offer potentially more appropriate conditions for employment developments of different use classes.	

5.3.2.2 Sustainability Objective 2) To ensure that new retail space is suitably provided and located within the Garden Community, with no subsequent harm to the retail function of Colchester town centre.

The SA explores the following issues on the site in regard to existing employment links:

- Broad distance to Colchester town centre

	SA Option 1 – ‘Current Development Concept’	SA Option 2 – ‘Alternative Option Pending Decision on Strategic Road Proposals.’
Impacts	+	+
Commentary	SA Options 1 and 2 have both been assessed as having (or otherwise can be expected as having in the consideration of SA Option 2) positive impacts due to the inclusion of a ‘town centre’ and the additional inclusion of a number of local / neighbourhood centres that are well located in response to residential areas. These centres are well located in regard to employment areas and public transport modes also, which are likely to ensure their viability through more sustained footfalls. The element of the Sustainability Objective that explores the potential impact of the Garden Community on the town centre of Colchester can not be assessed at this high level and without qualitative judgements. As such, this theme is considered more of a policy based criterion. Nevertheless, more high level judgements can be made through clear alignment to the retail strategies of Colchester and Braintree in regard to centre classification and policy requirements within the emerging Local Plans. This is a recommendation for future iterations of the Plan.	

5.3.2.3 Sustainability Objective 3) To maximise existing linkages and strengths in the local economy.

The SA explores the following issues on the site in regard to existing employment links:

- Broad distances to employment centres

	SA Option 1 – 'Current Development Concept'	SA Option 2 – 'Alternative Option Pending Decision on Strategic Road Proposals.'
Impacts	++	++
Commentary	Both SA Options are in close proximity to employment in the town of Colchester and Tollgate / Stanway and are accessible to regionally important employment hubs and London Stansted Airport wider afield via rail and strategic road links. The proximity of existing, and suitable integration, of public transport opportunities is explored in the assessment of options against Sustainability Objective 10. Both SA Options have been assessed as having significantly positive impacts at this stage.	

5.3.2.4 Sustainability Objective 4) To minimise the loss of the best and most versatile agricultural land.

The SA explores the following issues on the site in regard to soil quality:

- Agricultural Land Classification
- Potential contamination issues

	SA Option 1 – 'Current Development Concept'	SA Option 2 – 'Alternative Option Pending Decision on Strategic Road Proposals.'
Impacts	-	-
Commentary	Both SA Options are within Grade 2 Agricultural Land which is classified as very good and as such, negative impacts have been identified. Negative impacts are not significant however due to the prevalence of Grade 2 agricultural land within Colchester and Braintree districts and the inability of any development of the land to ensure that losses are minimised. This is not a criticism of the plan or the principle of the Garden Community and is more associated with the nature and notion of development of this scale within the two districts. At this early stage, contamination issues have not been identified specifically for parcels of land associated with former land uses; however it should be noted that there are not any identified land uses on site that have been identified as being identified as potential contaminants. In any eventuality, the scale of the Garden Community can ensure that remediation is ensured and that contaminated land is brought back into use with positive outcomes.	

5.3.2.5 Sustainability Objective 5) To ensure sufficient accessible natural green space throughout the Garden Community to benefit the new community and the surrounding rural areas.

The SA explores the following issues on the site in regard to the provision of accessible natural green space:

- The extent of open space within the SA Options
- The location of open space within the SA Options and accessibility to residential areas

	SA Option 1 – ‘Current Development Concept’	SA Option 2 – ‘Alternative Option Pending Decision on Strategic Road Proposals.’
Impacts	+	+
Commentary	<p>Both SA Options have been identified as having positive impacts on the provision and location of new accessible natural green space within the Garden Community. The development concepts both include significant networks of green space commensurate to the requirements and notion of Garden Communities. At this early stage, impacts are not significant where only broad layouts are required to be identified. It is considered that the identification of accessible natural green space, in the form of identified areas for specific functions (such as parkland, recreation etc.) and the relationship between such areas is not necessary to be identified at this stage and will be better integrated into the Garden Community following public consultation and compliance with Charter Principles 7 (community engagement) and 8 (active local stewardship). A re-assessment of the options within the SA process, and any possible sub-options should they be identified through consultation / engagement, will likely be required to accompany future iterations of the Plan.</p>	

5.3.2.6 Sustainability Objective 6) To improve areas between existing settlements and new development, to repair the severance of existing communities, especially Marks Tey and to ensure that there is no coalescence with existing settlements.

The SA explores the following issues on the site in regard to landscape:

- Landscape Character Areas – sensitivity to change
- Possible coalescence with neighbouring settlements
- Presence of existing dwellings on site

	SA Option 1 – ‘Current Development Concept’	SA Option 2 – ‘Alternative Option Pending Decision on Strategic Road Proposals.’
Impacts	+	?
Commentary	<p>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. The local 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 options has implications associated with the Blackwater River Valley Landscape Character Area which is more sensitive to views. Both options can be seen to avoid any built development in those river valleys associated with the site, namely the Roman River towards the north of the Garden Community boundary (inclusive of a surrounding belt of open space) and Domsey Brook in the south and permeating the Garden Community towards the identified ‘town centre.’ Regarding coalescence, both options also present development concepts that do not result in urban encroachment on existing settlements. In this regard, the SA Options both adhere (or can be expected to adhere) to the Garden City Principle of ensuring a surrounding belt of countryside to prevent sprawl. Associated with existing settlements on site, both SA Options also have consideration of Marks Tey in the northern half of the Garden Community, with adequate separation of this settlement with new development. Consideration is also given to Little Tey. Severance is avoided in the case of both existing settlements through ensuring that the indicative road network serves both settlements and provides access to the new ‘town centre’ and the network of more localised local / neighbourhood centres.</p> <p>Despite this, SA Option 2 can be seen to (at least comparably) physically separate new development south and east of the A12 with the rest of the Garden Community to the north. For this reason, uncertain impacts are highlighted for SA Option 2, with positive impacts identified for SA Option 1. At this early stage in the plan-making process and equally in the process of developing the development frameworks, impacts are not highlighted as significant. A re-assessment of the SA Options would be needed when more detailed information is presented in future iterations of the Plan.</p>	

5.3.2.7 Sustainability Objective 7) To ensure that a range of services and facilities are included and suitably located within the Garden Community to maximise social inclusivity and to ensure sustainable land use patterns that maximise accessibility between jobs, homes, services and facilities

The SA explores the following issues on the site in regard to new services and facilities and accessibility between jobs, homes, services and facilities:

- Distribution / access of neighbourhood / local centres and employment areas in regard to new residential areas.

	SA Option 1 – ‘Current Development Concept’	SA Option 2 – ‘Alternative Option Pending Decision on Strategic Road Proposals.’
Impacts	++	+
Commentary	SA Option 1 has been assessed as having significant positive impacts on this Sustainability Objective. The employment areas and new local / neighbourhood centres included within the Development Concept can be seen to be in close proximity to those larger areas of residential development, and all have good internal access to road links and green infrastructure / active modes of transportation. SA Option 2, in comparison can be expected to have minor positive impacts. The expected distribution of employment areas to the A12 corridor would ensure comparatively less easy access from residential areas, concentrating employment areas in a single broad area, although the distribution of other services and facilities could be seen as comparable to SA Option 1. Nevertheless, the severance of areas south of the A12 in SA Option 2 can be seen as not adhering as positively to notions of social inclusivity as SA Option 1.	

5.3.2.8 Sustainability Objective 8) To ensure a mix of housing types and tenures with as high a proportion of affordable units as possible.

No assessment of the Development Concept options has been made regarding this Sustainability Objective. In addition to being considered a more ‘policy based’ requirement of any proposal, any impacts associated with opportunities would be indistinguishable between the options.

	SA Option 1 – ‘Current Development Concept’	SA Option 2 – ‘Alternative Option Pending Decision on Strategic Road Proposals.’
Impacts	0	0
Commentary	No assessment of the options has been made regarding this Sustainability Objective.	

5.3.2.9 Sustainability Objective 9) To ensure the delivery of new schools and other infrastructure to support the Garden Community.

No assessment of the Development Concept options has been made regarding this Sustainability Objective. In addition to being considered a more 'policy based' requirement of any proposal, any impacts associated with opportunities would be indistinguishable between the options.

	SA Option 1 – 'Current Development Concept'	SA Option 2 – 'Alternative Option Pending Decision on Strategic Road Proposals.'
Impacts	0	0
Commentary	No assessment of the options has been made regarding this Sustainability Objective.	

5.3.2.10 Sustainability Objective 10) To ensure suitable public transport improvements and maximise sustainable transport modes on site, minimise vehicle emissions, and to ensure effective links to existing off-site public transport services and interchanges.

The SA explores the following issues on the site in regard to public transport modes:

- Distribution / access of MRT and public transport routes / stops in regard to new residential areas and rail links.

	SA Option 1 – 'Current Development Concept'	SA Option 2 – 'Alternative Option Pending Decision on Strategic Road Proposals.'
Impacts	++	+
Commentary	<p>The distribution and accessibility of MRT and public transport routes / stops in regard to new residential areas and rail links can be seen as / expected to be largely indistinguishable between SA Options. Despite this, a notable difference between the SA Options is the possible location of a newly integrated park and ride facility. There can be seen to be a larger possibility of negative social and environmental impacts (such as air quality) arising from SA Option 2, with park and ride facilities comparatively more internalised within the wider scheme. As an element of the Garden Community that can be seen to serve a wider function than that of the Garden Community itself, it is considered possible that there could be an increase in traffic from wider afield affecting residential areas (as a sensitive receptor) under SA Option 2 where routes might not be as well located. In comparison, the park and ride within the development concept for SA Option 1 is located with more direct access from the A12, with less traffic affecting residential areas. For these reasons, significantly positive impacts are highlighted for SA Option 1 and minor positive impacts identified for SA Option 2.</p>	

5.3.2.11 Sustainability Objective 11) To ensure suitable and permeable access to and within the site, minimising the impacts of separation associated with the Great Eastern Main Line and A-roads on site and to ensure appropriate linkages to the existing road network.

The SA explores the following issues on the site in regard to access within the site:

- Permeability on site
- Severance due to the A12 and rail line

	SA Option 1 – ‘Current Development Concept’	SA Option 2 – ‘Alternative Option Pending Decision on Strategic Road Proposals.’
Impacts	++	?/-
Commentary	The direct access of both options to the A12 and A120 can be considered advantageous in terms of connectivity in the wider context. Both options can be seen to offer numerous rail crossings and effective options for connectivity to spinal roads within the Garden Community. Regarding A12 separation, the severance of those residential areas south of the A12 in SA Option 2 can be seen as not adhering as positively to notions of social inclusivity as SA Option 1. This can be seen as the primary difference between the two SA Options across all of the Sustainability Objectives. For this reason, significantly positive impacts are highlighted for SA Option 1, and uncertain to negative impacts identified for SA Option 2.	

5.3.2.12 Sustainability Objective 12) To ensure an appropriate level of car parking.

No assessment of the Development Concept options has been made regarding this Sustainability Objective. In addition to being considered a more ‘policy based’ requirement of any proposal, any impacts associated with opportunities would be indistinguishable between the options.

	SA Option 1 – ‘Current Development Concept’	SA Option 2 – ‘Alternative Option Pending Decision on Strategic Road Proposals.’
Impacts	0	0
Commentary	No assessment of the options has been made regarding this Sustainability Objective.	

5.3.2.13 Sustainability Objective 13) To ensure suitable and innovative utility provision, including high-speed and broadband and to ensure the design of new development is capable of maximising innovative forms of emerging utility-related technologies.

	SA Option 1 – ‘Current Development Concept’	SA Option 2 – ‘Alternative Option Pending Decision on Strategic Road Proposals.’
Impacts	0	0
Commentary	No assessment of the options has been made regarding this Sustainability Objective.	

5.3.2.14 Sustainability Objective 14) To protect and enhance existing features of biodiversity through green corridors and ensure links between new habitats within the Garden Community and those that exist over a wider area.

The SA explores the following issues on the site in regard to biodiversity:

- Direct impact on Natura 2000 sites
- The presence of SSSIs
- Presence of Local Wildlife Sites
- Presence of priority habitats on site

	SA Option 1 – ‘Current Development Concept’	SA Option 2 – ‘Alternative Option Pending Decision on Strategic Road Proposals.’
Impacts	+	+
Commentary	Positive impacts have been highlighted for both SA Options The Appropriate Assessment undertaken for Braintree and Colchester’s emerging Local Plans concludes that the site (and therefore both options) will not have any specific impacts related to the loss of off-site impacts on Natura 2000 sites. Impacts have been identified commensurate to the level of growth in the wider area however, with Recreational Avoidance Mitigation Strategies being produced. Both options lie within a SSSI Impact Risk Zone of the Brickfield Pit SSSI, which is also a Local Wildlife Site (LoWS). In broad consideration of the impacts on this SSSI, it should be noted at this early indicative stage that both options seek to integrate the designation within a wider belt of countryside, with separation from the site to the nearest residential / built areas. Both SA Options contain an additional LoWS at Little Tey Churchyard, which is not identified, broadly, within any identified areas for development. Despite this, care will have to be taken to not impact on this designation within more detailed iterations of the Plan. No other significant areas of priority habitat exist within the wider area of the SA Options, with the majority of the site free from any such habitats.	

5.3.2.15 Sustainability Objective 15) To ensure that recreational activity does not have negative effects on wildlife conservation and protection in the wider area.

No assessment of the Development Concept options has been made regarding this Sustainability Objective. In addition to being considered a more ‘policy based’ requirement of any proposal, any impacts associated with opportunities would be indistinguishable between the options.

	SA Option 1 – ‘Current Development Concept’	SA Option 2 – ‘Alternative Option Pending Decision on Strategic Road Proposals.’
Impacts	0	0
Commentary	No assessment of the options has been made regarding this Sustainability Objective.	

5.3.2.16 Sustainability Objective 16) To ensure the protection, enhancement and creation of features of a landscape value throughout the Garden Community.

The SA explores the following issues on the site in regard to landscape features:

- Presence of priority habitats and known features of landscape value on site.

	SA Option 1 – ‘Current Development Concept’	SA Option 2 – ‘Alternative Option Pending Decision on Strategic Road Proposals.’
Impacts	+	+
Commentary	At this early stage, detailed impacts have not been identified as quantitative. As such, landscape features can only be identified as designated assets. No significant areas of priority habitat or such other landscape features exist within the wider area of the Options, aside from those larger designations mentioned within the assessment of the Options against other Sustainability Objectives. With that in mind, and evidenced through the integration of significant areas of green infrastructure throughout the Garden Community under both SA Options, there will be generally positive impacts at this stage. A re-assessment of the SA Options against this Sustainability Objective will likely need to be undertaken in future iterations of the Plan and in response to public consultation and community engagement mechanisms in order to gather more localised perspectives on features of value on site. Until then, positive impacts are highlighted for both options.	

5.3.2.17 Sustainability Objective 17) To ensure that the Garden Community is integrated into the existing rural landscape.

No assessment of the Development Concept options has been made regarding this Sustainability Objective at this stage and pending further detail. In addition to being considered a more ‘policy based’ requirement of any proposal through newly created and compatible on-site features, any impacts associated with opportunities would be indistinguishable between the options.

	SA Option 1 – ‘Current Development Concept’	SA Option 2 – ‘Alternative Option Pending Decision on Strategic Road Proposals.’
Impacts	0	0
Commentary	No assessment of the options has been made regarding this Sustainability Objective.	

5.3.2.18 Sustainability Objective 18) To embrace sustainable forms of energy production and distribution.

No assessment of the Development Concept options has been made regarding this Sustainability Objective. In addition to being considered a more 'policy based' requirement of any proposal through newly created and compatible on-site features, any impacts associated with opportunities would be indistinguishable between the options.

	SA Option 1 – 'Current Development Concept'	SA Option 2 – 'Alternative Option Pending Decision on Strategic Road Proposals.'
Impacts	0	0
Commentary	No assessment of the options has been made regarding this Sustainability Objective.	

5.3.2.19 Sustainability Objective 19) To ensure that there is no deterioration in water quality as a result of development.

The SA explores the following issues on the site in regard to water quality:

- Impacts on flows
- The presence of water bodies on site
- Groundwater Protection Zones
- Water quality of water courses in and in proximity of the site

	SA Option 1 – 'Current Development Concept'	SA Option 2 – 'Alternative Option Pending Decision on Strategic Road Proposals.'
Impacts	?	?
Commentary	<p>Both options have been identified as having the potential to impact on flows entering the Roman River and Domsey Brook. Water bodies altered by human activity may be classified as Heavily Modified (HMWB) or Artificial (AWB) and have an objective to achieve 'good potential'. The Domsey Brook and the Roman River, both within the site, have a 'moderate' overall status. Pressures from development that could cause deterioration include:</p> <ol style="list-style-type: none"> 1. Alteration of river banks and river beds 2. Barriers that restrict movement of, for example, fish 3. Cumulative impacts in a particular catchment 4. Diffuse pollution from surface water 5. Reduced flow in rivers <p>In the case of the Domsey Brook water course, the current location of the Brook follows the path of MRT and public transport route emanating from the 'town centre' for both Options. Although no specific development has been identified along this route that is not water compatible, effects on the water course can not be ruled out for either Option at this early</p>	

	SA Option 1 – ‘Current Development Concept’	SA Option 2 – ‘Alternative Option Pending Decision on Strategic Road Proposals.’
	stage. Other than these water course and small tributaries associated with them, the site does not contain any significant water bodies. Uncertain impacts are highlighted at this stage for both Options.	

5.3.2.20 Sustainability Objective 20) To ensure that there is no increase in fluvial or surface water flood risk as a result of development, with positive outcomes sought in regards to biodiversity gain and blue infrastructure networks through SuDS.

The SA explores the following issues on the site in regard to fluvial flood risk:

- Presence of land within Flood Risk Zones 2 and 3

	SA Option 1 – ‘Current Development Concept’	SA Option 2 – ‘Alternative Option Pending Decision on Strategic Road Proposals.’
Impacts	?/+	?/+
Commentary	Significant levels of flood risk have been identified along river stretches. The Roman River exists at the both SA Options’ north eastern boundary and the channel ensures that the surrounding area has land with is in Flood Risk Zones 2 and 3. No development is proposed for this area. At the Options’ southern boundary, Flood Risk zones 2 and 3 are associated with Domsey Brook. This brook also extends to the central area of the site from the south. The current location of the Brook follows the path of MRT and public transport route emanating from the ‘town centre’ for both SA Options. No specific development has been identified along this channel and at this early indicative development concept stage this is considered an adequate approach to this constraint subject to more detailed assessment in future Plan iterations. Further assessment will be required regarding surface water flood risk once more detailed concepts are developed. Overall, uncertain to positive impacts have been identified for both SA Options.	

5.3.2.21 Sustainability Objective 21) To protect, and where possible, enhance designated and non-designated heritage assets and their settings both above and below ground.

The SA explores the following issues on the site in regard to the historic environment:

- Presence of heritage assets
- Impact on heritage assets and their settings (subject to further investigation / assessment once more detailed proposals have been identified within the Plan)

	SA Option 1 – ‘Current Development Concept’	SA Option 2 – ‘Alternative Option Pending Decision on Strategic Road Proposals.’
Impacts	?	?
Commentary	<p>A Scheduled Monument (circular brick kilns, W H Collier Brick and Tile Works, Church Lane) exists within the Marks Tey Brickpit SSSI and within the site at the north eastern boundary, however this area is not identified for development in either Option and forms part of a surrounding belt of countryside. The Garden Community boundary is also in close proximity to a Scheduled Monument (a Roman villa 450m south of Warren’s Farm to the north), but not proposed for any built development. Outside, but bordering the red-line boundary of the Garden Community, are a number of Listed Buildings and a Scheduled Monument (a long mortuary enclosure and round barrow 160m south west of Frame Farm) at Feering. Again, these areas are not proposed for any development, however in each instance ‘proximity’ is not a sufficient indicator of any potential impacts and much will depend on detailed proposals in these broad areas to factor in wider impacts on setting. A number of Listed Buildings extend north of the existing A120 around the existing nursery, Mott’s Farm and Knave’s Farm. Another cluster of Listed Buildings north of the existing A120 is situated at Teybrook Farm. At this early stage, it would appear that a number of these clusters correlate to areas identified as neighbourhood centres however further assessment will be needed once more detailed proposals have been identified within the Plan and in consideration of each asset based on their individual sensitivities. Overall however, uncertain impacts are identified at this stage.</p>	

5.3.3 Mitigation Measures & Recommendations

No mitigation measures have been identified at this stage commensurate to the level of detail of the Plan and the acknowledgement that the Development Concepts presented are indicative and subject to public consultation and wider engagement. Nevertheless, a series of further recommendations are made for inclusion in future Plan iterations. These are:

- A clearer alignment to the retail strategies of Colchester and Braintree would be useful in regard to centre classification and policy requirements within the emerging Local Plans. It is possible that any comparison shopping facilities within the Garden Community 'town centre' could impact on Colchester Town Centre.
- It is considered that the identification of accessible natural green space, in the form of identified areas for specific functions (such as parkland, recreation etc.) and the relationship between such areas is not necessary to be identified at this stage and will be better integrated into the Garden Community following public consultation and compliance with Charter Principles 7 (community engagement) and 8 (active local stewardship). Nevertheless, better judgements as to sustainability can be made should specific areas be identified in future Plan iterations.
- Both SA Options contain a Local Wildlife Site at Little Tey Churchyard. Although not identified, broadly, within any identified areas for development, care will have to be taken to not impact on this designation within more detailed iterations of the Plan.
- Through the integration of significant areas of green infrastructure throughout the Garden Community under both SA Options, there will be generally positive impacts at this stage. A re-assessment of the SA Options against this theme will likely need to be undertaken in future iterations of the Plan and in response to public consultation and community engagement mechanisms in order to gather more localised perspectives on features of value on site.
- In the case of the Domsey Brook water course, the current location of the Brook appears to follow the path of MRT and public transport route emanating from the 'town centre' southwards. Although no specific development has been identified along this route that is not potentially water compatible, effects on the water course can not be ruled out at this early stage and further detail would need to be highlighted in future Plan iterations. Further assessment will also be required regarding surface water flood risk once a more detailed concept is developed.
- Although not specifically correlating to areas identified for development, a number of peripheral Scheduled Monuments exist at the site's boundary. Impacts on these designations and their settings will need to be assessed fully once more detailed proposals are identified for the Garden Community and sensitivities considered. This is also the case for the number of Listed Buildings (and clusters) within the site.

6. Non-Technical Summary, Conclusions and Recommendations

6.1 The Plan's Themes and Principles

6.1.1 Key Points from the Assessment of the Plan's Themes and Principles

The following table sets out the impacts identified through the appraisal of the Plan's Themes and Principles.

Table 9: Summary of Impacts of the Plan's Themes and Principles

Sustainability Objectives (SO)		Theme 1: Place and Integration	Theme 2: Community	Theme 3: Delivery
ECONOMIC OBJECTIVES	1	++	0	+
	2	+	0	+
	3	++	0	+
	4	-	0	0
SOCIAL OBJECTIVES	5	++	+	+
	6	++	0	+
	7	+	+	+
	8	+	0	+
	9	+	0	+
	10	++	0	+
	11	++	0	+
	12	?	0	+
	13	+	0	+

Sustainability Objectives (SO)		Theme 1: Place and Integration	Theme 2: Community	Theme 3: Delivery
ENVIRONMENTAL OBJECTIVES	14	++	+	+
	15	+	+	+
	16	++	+	+
	17	++	0	+
	18	++	0	+
	19	?	0	+
	20	?	+	+
	21	?	0	+

The following key points can be made from the appraisal of the Plan's Themes and Principles:

- Significant positive impacts are highlighted for Sustainability Objective 1, where the Plan identifies that the new location could provide for Grade A offices linked to a new station and attractive to financial services, the creative and digital economy related to Colchester's emerging role in this sector and the presence of the University, construction innovation, logistics and the energy sector, in particular opportunities in renewables and waste.
- Positive impacts have been highlighted regarding Sustainability Objective 2 and a need for convenience retail provision. The Plan acknowledges that the Garden Community will need to establish neighbourhoods where everything is within easy walking distance, planned around connected centres, which provide a mix of homes, jobs and services set within attractive and green environments.
- Significant positive impacts have been identified for Sustainability Objective 3, regarding capitalising on the links to local employment opportunities and taking advantage of the site's proximity to economic hubs.
- There will be significant positive impacts regarding accessible natural green space through requirements for open space to be integrated throughout the Garden Community and also the integration of major local new parkland.
- There will be significant positive impacts on Sustainability Objective 6 regarding coalescence in response to the new community, through Theme 1, addressing the relationship with existing communities close to and within its boundaries.
- There will be positive impacts on Sustainability Objective 8, regarding the provision of a mix of house types and tenures.

- Significant positive impacts have been highlighted regarding Sustainability Objective 9 and the provision of schools and other supporting infrastructure.
- The Plan's Principle 2 recognises the importance of ensuring the highest level of strategic connectivity with the wider transport system, additionally identifying that the Garden Community site has existing issues of poor connectivity and traffic congestion, transport corridors that divide existing communities and create environmental problems, particularly at peak times, and poor access to key locations such as schools, local shops and the railway station.
- Significant positive impacts are also identified regarding Sustainability Objective 11, regarding access to existing roads and the provision of a suitable network of roads on site.
- Charter Principle 5 will ensure positive impacts on Sustainability Objective 13, regarding innovative utility provision.
- Significant positive impacts have been identified for Sustainability Objective 16, where the Plan states that, 'Habitats in and around the Domsey Brook, Roman River corridors and around Seven Star Green should be retained and enhanced.
- In response to the aspirations of Sustainability Objectives 16 and 17, regarding protecting and creating landscape features on site, and also ensuring that the Garden Community is integrated within the existing rural landscape, there will be significant positive effects. This is due to the Plan ensuring a high standard of design and layout, drawing on its context and the assets within and close to its boundaries.
- There will be positive impacts associated with renewable energy and energy efficiency (Sustainability Objective 18) through Principle 5, in particular the Smart Infrastructure principles.
- There will be positive implications regarding those Sustainability Objectives related to open space management and ensuring an appropriate and desirable level of services and facilities, through effective community engagement and active stewardship once the Garden Community has been delivered.
- Theme 3 will ensure, indirectly, that the majority of the Sustainability Objectives will be met with positive outcomes. The Plan states that there is a '...desire of the public sector, represented by the partnership of four local Councils and representing the interests of the wider North Essex communities, to play a full and active role in the development of the three Garden Communities, and to participate in both the risks and the rewards of development, securing benefits for the wider communities.' With a preference for the formation of local Development Corporations to prepare masterplans and other guidance, the Plan and Council's aspire to offer truly sustainable outcomes.
- Negative impacts have been highlighted for the loss of Grade 2 Agricultural Land, which represents the highest grade soils within the Districts of both Braintree and Colchester. Despite this, impacts are not highlighted as significant due to the prevalence of Grade 2 soils in both Districts.

6.1.2 Mitigation Measures and Recommendations regarding the Plan's Vision, Themes and Principles

The following key points can be made from the appraisal of the Plan's Vision, Themes and Principles:

- The type of retail offer within the Garden Community's town centre is not yet established, and therefore the possible effects on the existing town centre of Colchester and the function of Tollgate are yet to be identified. It is recommended that the type of shopping (convenience / comparison) is included within the Plan in order to identify any broad implications.
- The Plan could elaborate in future iterations how different types of housing could be integrated within the wider design of the Garden Community, in addition to affordable units, to ensure social inclusivity.
- The commentary regarding Charter Principle 4 could elaborate on the locational requirements of secondary schools that will be forthcoming from the Garden Community development.
- Charter Principle 5 identifies that the use of Smart Vehicles would make full provision for electric vehicle charging infrastructure linked to renewable energy generation while Smart Car-Sharing would use technology to make cars available for occasional use and would help manage Smart Parking. It is unsure whether this element of the Plan is suitable in response to the baseline data of car ownership in the wider area and the need for the development of 'specific garden community parking approaches and standards that help promote the use of sustainable transport and make efficient use of land' as identified in the emerging Colchester and Braintree Local Plan Policy SP7 - Development and Delivery of New Garden Communities in North Essex. It is recommended that more detail on parking requirements is included within future iterations of the Plan.
- Future iterations of the Plan could include specific mention of the requirements of day to day utility provision on site, aside from those related to energy efficiency, power and digital communications.
- Uncertain impacts have been identified regarding Sustainability Objective 19, ensuring that there is no deterioration in water quality as a result of development, in the absence of direct mention of the potential effects of development on existing water courses of the Roman River and Domsey Brook in Theme 1. It is recommended that measures to ensure that water quality does not deteriorate are included within the Plan.
- It is recommended that text as to specific areas of biodiversity creation and the enhancement of existing features is included within future iterations of the Plan.
- Fluvial flood risk is not specifically mentioned within the Plan, and it is recommended that ways to ensure areas of flood risk are factored into the wider landscape design of the Garden Community are included within future iterations of the Plan.

The Plan does not include notions of enhancing the historic environment and the numerous designated assets within the site area. It is recommended that the relationship between new built development and these assets and their settings is recognised and elaborated on in future iterations of the Plan, with enhancement sought.

6.2 The Plan's Development Concept Option

6.2.1 Key Points from the Assessment of the Plan's Development Concept Option

The following table sets out the impacts identified through the appraisal of the Plan's Development Concept option.

Table 10: Summary of Impacts of the Plan's Development Concept and Alternative Option

Sustainability Objectives (SO)		SA Option 1 – 'Current Development Concept'	SA Option 2 – 'Alternative Option Pending Decision on Strategic Road Proposals.'
ECONOMIC OBJECTIVES	1) To ensure that new employment and complimentary uses are suitably provided and located within the Garden Community.	++	+
	2) To ensure that new retail space is suitably provided and located within the Garden Community, with no subsequent harm to the retail function of Colchester town centre.	+	+
	3) To maximise existing linkages and strengths in the local economy.	++	++
	4) To minimise the loss of the best and most versatile agricultural land.	-	-
SOCIAL OBJECTIVES	5) To ensure sufficient accessible natural green space throughout the Garden Community to benefit the new community and the surrounding rural areas.	+	+
	6) To improve areas between existing settlements and new development, to repair the severance of existing communities, especially Marks Tey and to ensure that there is no coalescence with existing settlements.	+	?
	7) To ensure that a range of services and facilities are included and suitably located within the Garden Community to maximise social inclusivity and to ensure sustainable land use patterns that maximise accessibility between jobs, homes, services and facilities	++	+

Sustainability Objectives (SO)		SA Option 1 – 'Current Development Concept'	SA Option 2 – 'Alternative Option Pending Decision on Strategic Road Proposals.'
	8) To ensure a mix of housing types and tenures with as high a proportion of affordable units as possible.	0	0
	9) To ensure the delivery of new schools and other infrastructure to support the Garden Community.	0	0
	10) To ensure suitable public transport improvements and maximise sustainable transport modes on site, minimise vehicle emissions, and to ensure effective links to existing off-site public transport services and interchanges.	++	+
	11) To ensure suitable and permeable access to and within the site, minimising the impacts of separation associated with the Great Eastern Main Line and A-roads on site and to ensure appropriate linkages to the existing road network.	++	?/-
	12) To ensure an appropriate level of car parking.	0	0
	13) To ensure suitable and innovative utility provision, including high-speed and broadband and to ensure the design of new development is capable of maximising innovative forms of emerging utility-related technologies.	0	0
ENVIRONMENTAL OBJECTIVES	14) To protect and enhance existing features of biodiversity through green corridors and ensure links between new habitats within the Garden Community and those that exist over a wider area.	+	+
	15) To ensure that recreational activity does not have negative effects on wildlife conservation and protection in the wider area.	0	0
	16) To ensure the protection, enhancement and creation of features of a landscape value throughout the Garden Community.	+	+
	17) To ensure that the Garden Community is integrated into the existing rural landscape.	0	0
	18) To embrace sustainable forms of energy production and distribution.	0	0

Sustainability Objectives (SO)		SA Option 1 – 'Current Development Concept'	SA Option 2 – 'Alternative Option Pending Decision on Strategic Road Proposals.'
	19) To ensure that there is no deterioration in water quality as a result of development.	?	?
	20) To ensure that there is no increase in fluvial or surface water flood risk as a result of development, with positive outcomes sought in regards to biodiversity gain and blue infrastructure networks through SuDS.	?/+	?/+
	21) To protect, and where possible, enhance designated and non-designated heritage assets and their settings both above and below ground.	?	?

The following key points can be made from the appraisal of the Plan's Spatial Boundary Options:

- The employment areas included within the Development Concept can be seen to be in close proximity to those larger areas of residential development, and all have good strategic access to rail or road links. SA Option 2, in comparison will have minor positive impacts.
- SA Options 1 and 2 have both been assessed as having positive impacts on retail due to the inclusion of a 'town centre' and the additional inclusion of a number of local / neighbourhood centres that are well located in response to residential areas.
- Both SA Options are in close proximity to employment in the town of Colchester and Tollgate / Stanway and are accessible to regionally important employment hubs and London Stansted Airport wider afield via rail and strategic road links.
- Both SA Options are within Grade 2 Agricultural Land which is classified as very good and as such, negative impacts have been identified. Negative impacts are not significant however due to the prevalence of Grade 2 agricultural land within Colchester and Braintree districts and the inability of any development of the land to ensure that losses are minimised.
- Both SA Options have been identified as having positive impacts on the provision and location of new accessible natural green space within the Garden Community.
- Regarding coalescence, both options also present development concepts that do not result in urban encroachment on existing settlements. In this regard, the options both adhere to the Garden City Principle of ensuring a surrounding belt of countryside to prevent sprawl.
- Associated with existing settlements on site, both options also have consideration of Marks Tey, with adequate separation of this settlement with new development. Consideration is also given to Little Tey. Severance is avoided in the case of both existing settlements through ensuring that the indicative road network serves both settlements and provides access to the new 'town centre' and the network of more localised local / neighbourhood centres.

- SA Option 2 can be seen to (at least comparably) physically separate new development south and east of the A12 with the rest of the Garden Community to the north.
- The employment areas and new local / neighbourhood centres included within the Development Concept can be seen to be in close proximity to those larger areas of residential development, and all have good internal access to road links and green infrastructure / active modes of transportation. SA Option 2, in comparison will have minor positive impacts.
- The severance of those areas south of the A12 in SA Option 2 can be seen as not adhering as positively to notions of social inclusivity as SA Option 1.
- The distribution and accessibility of MRT and public transport routes / stops in regard to new residential areas and rail links can be seen as largely indistinguishable between options. Despite this, a notable difference between the options is the location of a newly integrated park and ride facility. There can be seen to be a larger possibility of negative social and environmental impacts (such as air quality) arising from SA Option 2, with park and ride facilities potentially being comparatively more internalised within the wider scheme.
- The direct access of both SA Options to the A12 and A120 can be considered advantageous in terms of connectivity in the wider context. Both options can be seen to offer numerous rail crossings and effective options for connectivity to spinal roads within the Garden Community.
- Both SA Options lie within a SSSI Impact Risk Zone of the Brickfield Pit SSSI, which is also a Local Wildlife Site (LoWS). In broad consideration of the impacts on this SSSI, it should be noted at this early indicative stage that both SA Options seek to integrate the designation within a wider belt of countryside.
- Both SA Options contain an additional LoWS at Little Tey Churchyard, which is not identified, broadly, within any identified areas for development.
- No significant areas of priority habitat or such other landscape features exist within the wider area of the SA Options.
- Both options have been identified as having the potential to impact on flows entering the Roman River and Domsey Brook. Water bodies altered by human activity may be classified as Heavily Modified (HMWB) or Artificial (AWB) and have an objective to achieve 'good potential'. The Domsey Brook and the Roman River, both within the site, have a 'moderate' overall status.
- In the case of the Domsey Brook water course, the current location of the Brook follows the path of MRT and public transport route emanating from the 'town centre' for both Options. Although no specific development has been identified along this route that is not water compatible, effects on the water course can not be ruled out.
- Significant levels of flood risk have been identified along river stretches. The Roman River exists at the both SA Options' north eastern boundary and the channel ensures that the surrounding area has land with is in Flood Risk Zones 2 and 3. No development is proposed for this area. At the Options' southern boundary, Flood Risk zones 2 and 3 are associated with Domsey Brook. This brook also extends to the central area of the site from the south.
- A Scheduled Monument (circular brick kilns, W H Collier Brick and Tile Works, Church Lane) exists within the Marks Tey Brickpit SSSI and within the site at the north eastern boundary, however this area is not identified for development in either SA Option and forms part of a

surrounding belt of countryside.

- The Garden Community boundary is also in close proximity to a Scheduled Monument (a Roman villa 450m south of Warren's Farm to the north), but not proposed for any built development. Outside, but bordering the red-line boundary of the Garden Community, are a number of Listed Buildings and a Scheduled Monument (a long mortuary enclosure and round barrow 160m south west of Frame Farm) at Feering. Again, these areas are not proposed for any development, however in each instance 'proximity' is not a sufficient indicator of any potential impacts and much will depend on detailed proposals in these broad areas to factor in wider impacts on setting.
- A number of Listed Buildings extend north of the existing A120 around the existing nursery, Mott's Farm and Knave's Farm. Another cluster of Listed Buildings north of the existing A120 is situated at Teybrook Farm. Further assessment will be needed once more detailed proposals have been identified within the Plan and in consideration of each asset based on their individual sensitivities.

6.2.2 Mitigation Measures and Recommendations regarding the Plan's Development Concept Option

No mitigation measures have been identified at this stage commensurate to the level of detail of the Plan and the acknowledgement that the Development Concept presented is indicative and subject to public consultation and wider engagement. Nevertheless, a series of further recommendations are made for inclusion in future Plan iterations. These are:

- A clearer alignment to the retail strategies of Colchester and Braintree would be useful in regard to centre classification and policy requirements within the emerging Local Plans.
- Both options contain a Local Wildlife Site at Little Tey Churchyard. Care will have to be taken to not impact on this designation within more detailed iterations of the Plan.
- In the case of the Domsey Brook water course, the current location of the Brook appears to follow the path of MRT and public transport route emanating from the 'town centre' south for both Options. Although no specific development has been identified along this route that is not potentially water compatible, effects on the water course can not be ruled out for either Option at this early stage and further detail would need to be highlighted in future Plan iterations. Further assessment will also be required regarding surface water flood risk once more detailed concepts are developed.
- Although not specifically correlating to areas identified for development, a number of peripheral Scheduled Monuments exist at the site's boundary. Impacts on these designations and their settings will need to be assessed fully once more detailed proposals are identified for the Garden Community and sensitivities considered. This is also the case for the number of Listed Buildings (and clusters) within the site.

6.3 Key Impacts of the Plan as a Whole

The Plan includes a series of Themes and Principles that can negate or seek to mitigate some of those on-site impacts that have been identified in the appraisal of the Garden Community Development Concept.

The assessment of the Development Concept has been undertaken from a 'policy off' point of view; impacts are identified without any consideration of the Plan's thematic content or principles at present. This section explores those instances where impacts can be negated or mitigated through the Plan as a whole at this stage.

It should be acknowledged however that the Plan is reflective of work undertaken to date, and some elements of site specifics will be more appropriately addressed within future stages of the Plan.

Issue identified in the appraisal of the Garden Community Development Concept Options	Is the issue addressed in the Plan's Themes and Principles?
Accessible natural green space, in the form of identified areas for specific functions (such as parkland, recreation etc.) and the relationship between such areas and general wildlife conservation.	The impacts regarding the relationship between different areas of open space, specifically between newly created habitats and recreation are partly considered within the Plan. The Plan states that, 'The provision of recreation facilities within the new Garden Community, including generous amounts of open space will help reduce the potential impact that additional residential uses will have on protected habitats in the area.'
Both options contain a Local Wildlife Site at Little Tey Churchyard and include the Marks Tey Brickpit SSSI.	The specific considerations of the Garden Community and these existing areas of wildlife conservation are not specifically considered within the Plan.
The channel of the Domsey Brook follows the path of MRT and public transport route emanating from the 'town centre' south for both Options. Effects of the development on water quality can not be ruled out at this stage.	The specific considerations of the Garden Community and the water quality of existing river channels on site are not specifically considered within the Plan.
The specific considerations regarding fluvial flood risk within the site.	The specific considerations of the Garden Community and fluvial flood risk on site are not specifically considered within the Plan.
The specific considerations regarding surface water flood risk within the site.	The Plan states that, 'The green spaces in the landscape framework can accommodate the following

Issue identified in the appraisal of the Garden Community Development Concept Options	Is the issue addressed in the Plan's Themes and Principles?
	functions: SUDS/ drainage and watercourses.'
Potential impacts on these Scheduled Monuments and Listed Buildings and their settings.	The importance of the historic environment is partly considered within the Plan although perhaps not in consideration of the protection and enhancement of assets as an irreplaceable resource. The Plan states, that, 'the landscape framework should recognise the value of existing landscape and historic features and their ability to absorb and shape the development of a new community'. It adds that, 'the design and layout should respond positively to the historic environment which creates opportunities for developing distinctiveness and interesting places.'

7. Next Steps & Monitoring

7.1 Consultation

This Scoping and Environmental Report will be subject to consultation alongside the Plan for Colchester Braintree Borders. 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. Braintree District Council and Colchester Borough Council 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 two Local Planning 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 two Local Planning Authorities.

PLEASE NOTE:

All comments on the content of this Scoping & Environmental Report should be sent to each authority’s online portal in line with the consultation arrangements of each Local planning Authority. 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/planningconsult>



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

November 2017



Essex County Council