

**Annex 1: Consultation Draft Sustainability Appraisal and Strategic Environmental Assessment of the Canvey Town Centre Masterplan**



castlepoint

benfleet | canvey | hadleigh | thundersley

Consultation Draft  
Sustainability Appraisal and  
Strategic Environmental Assessment

**Canvey Town Centre Masterplan**

May 2011

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# Non-technical summary

The Canvey Town Centre Masterplan (CTCMP) has been prepared by consultants BDP on behalf of the Castle Point Regeneration Partnership. This Partnership comprises of a range of organisations responsible for delivering social, economic, environmental and physical regeneration in Castle Point. Castle Point Borough Council has adopted the CTCMP as a supplementary planning document (SPD) within its Local Development Framework (LDF) in order to assist in the delivery of the plan. The adoption of the CTCMP as an SPD will provide confidence to developers that the local planning authority support regeneration of Canvey Town Centre and this is important for achieving the physical change required.

Work on the LDF undertaken, at date of the publication of this document, have focussed upon on the Core Strategy which sets out the overarching strategy and policies for the distribution of development in Castle Point. This was submitted to the Secretary of State for examination in public in March 2010. The Inspectors Report on this document is due in July 2011.

Under the Planning and Compulsory Purchase Act 2004, Local Authorities must undertake Sustainability Appraisal (SA) for each of their Development Plan Documents (DPDs). The SA is a process of identifying and evaluating the economic; social and environmental impacts of a plan or programme. A further requirement in undertaking such plans and programmes is compliance with the European Directive 2001/42/EC on Strategic Environmental Assessment (SEA). SA and SEA is therefore a statutory requirement for LDFs and the approach incorporated within this SA complies with both these requirements. This SA report takes into account the Core Strategy and other documents and assessments undertaken as part of the development of the Borough's Local Development Framework. The Sustainability Appraisal Baseline Report prepared for this sustainability appraisal therefore draws from the baseline report for existing LDF but also includes additional information which reflects the scope and scale of the CTCMP. The sustainability context of Canvey includes a mosaic of high quality coastal landscape with nature conservation sites of both national and international importance. Canvey's geographical origin, as reclaimed coastal marsh, has resulted in some of the largest sea defences in the UK. However a subsequent issue for the island is also surface water management. The Borough also has an ageing population and within west Canvey there is a pocket of deprivation caused by issues associated with employment, income, health and education.

The Borough also experiences high levels of out commuting to both London and surrounding town centres of Basildon and Southend. However, cost effective access to opportunities on both the edge of these towns and to those in towns in the north of the County are limited largely a result of a lack of public transport connectivity.

Within Canvey employment areas and town centres are of a poor environmental quality, detracting investment by higher economy employers. Additional employment floorspace (3,000m<sup>2</sup> per annum) and retail floorspace (10,000m<sup>2</sup> in total by 2027) is required to accommodate growth sectors and retail growth in order to address employment issues, out-commuting and economic growth requirements.

The Canvey Town Centre Masterplan identifies a plan for the regeneration of Canvey Town Centre. It identifies how the town centre can be improved to create more floorspace, more homes and better places for people to gather and enjoy the outdoors. The overall plan for Canvey Town Centre has been the subject of extensive consultation with residents to ensure that it delivers a town centre that they will be happy to use.

Initial work on the Canvey Town Centre Masterplan developed three reasonable options for the regeneration of Canvey Town Centre which were assessed through this SA process, these included:

- Option 1: Refurbishment
- Option 2: Extension
- Option 3: Redevelopment

Through the Sustainability Appraisal process these options were tested against the sustainability objectives. Option 3 emerged as the preferred option through this process, involving both additional retail floorspace and homes in the town centre, as well as creating both a robust destination for shopping and increasing the community benefits of the town centre. This option resulted in a significant reduction in the level of threat posed to undeveloped land on the urban periphery.

Various opportunities to improve the quality of the public realm, the highway network and the community uses in the town centre were also explored during the preparation of the masterplan. Generally these proposals performed well against the sustainability objectives as they would contribute towards improving the quality of the public realm. An issue did however arise around the provision of a market. It was assessed that the provision of a market may attract from the quality of the public realm if not laid out and managed correctly. There were also concerns that the closure of the highway to facilitate a market may create more congestion in the town centre rather than relieving it. This is particularly important as a number of the proposals seek to reduce congestion including greater provision for alternative transport modes, and also changes to the highway network in the town centre.

As a consequence of the Canvey Town Centre Masterplan and Sustainability Appraisal being prepared separately, it is necessary for the mitigation measures proposed to limit any negative sustainability impacts of the masterplan to be applicable through the Council's Adoption Statement of the Canvey Town Centre Masterplan. The mitigation suggested include:

- 1) Requiring proposals for the Lake Link to include ecological assessment and management of Canvey Lake Local Wildlife Site;
- 2) The quantum of housing development proposed to be defined;
- 3) Ongoing management and maintenance of the public realm to be secured;
- 4) Section 106 Agreements to be used to secure social and environmental benefits including highways improvements.

It is considered that if these requirements are included within the Adoption Statement, and applied when planning applications for Canvey Town Centre are considered, then the Canvey Town Centre Masterplan should make a positive contribution to sustainability and the environment.

There is however the potential for the Canvey Town Centre Masterplan to contribute towards cumulatively negative environmental impacts associated with flood risk and water quality as a result of development elsewhere on Canvey Island in respect of flood risk and elsewhere in South Essex and North Kent in respect of water quality. Flood risk mitigation measures are however already set out in the Canvey Town Centre Masterplan to mitigate against this, and similarly the Core Strategy sets out requirements in respect of flood risk for development sites elsewhere in Castle Point. With regard to water quality, Canvey Waste Water Treatment Works has a qualitative capacity license that has been assessed by the Environment Agency and will not be exceeded as a result of the proposals in Canvey Town Centre.

In order to ensure that unexpected negative consequences do not arise from the delivery of the Canvey Town Centre Masterplan, a monitoring framework has been prepared. This sets out the actions that need to be taken if any of the indicators should show negative performance.

# 1. Introduction

## This Report

This report is the Sustainability Appraisal report for the proposed Canvey Town Centre Masterplan Supplementary Planning Document. The Sustainability Appraisal (SA) process is an integral part of preparing LDF documents including supplementary planning documents. The aim of the SA process is to assess the overall environmental, social and economic impact of the plan to ensure that it contributes towards achieving sustainable development.

When preparing a sustainability appraisal of a supplementary planning document, the following priorities are considered:

1. To provide a robust SA adds value to the plan-making process
2. To form an integral part of the plan preparation process
3. The plan and the SA should, where possible, share a common evidence base
4. Other assessment processes should feed into the SA process where appropriate
5. The SA report should document the 'story' behind the plan's preparation
6. The significant effects identified through the SA should be monitored through the annual monitoring report

## The Local Development Framework

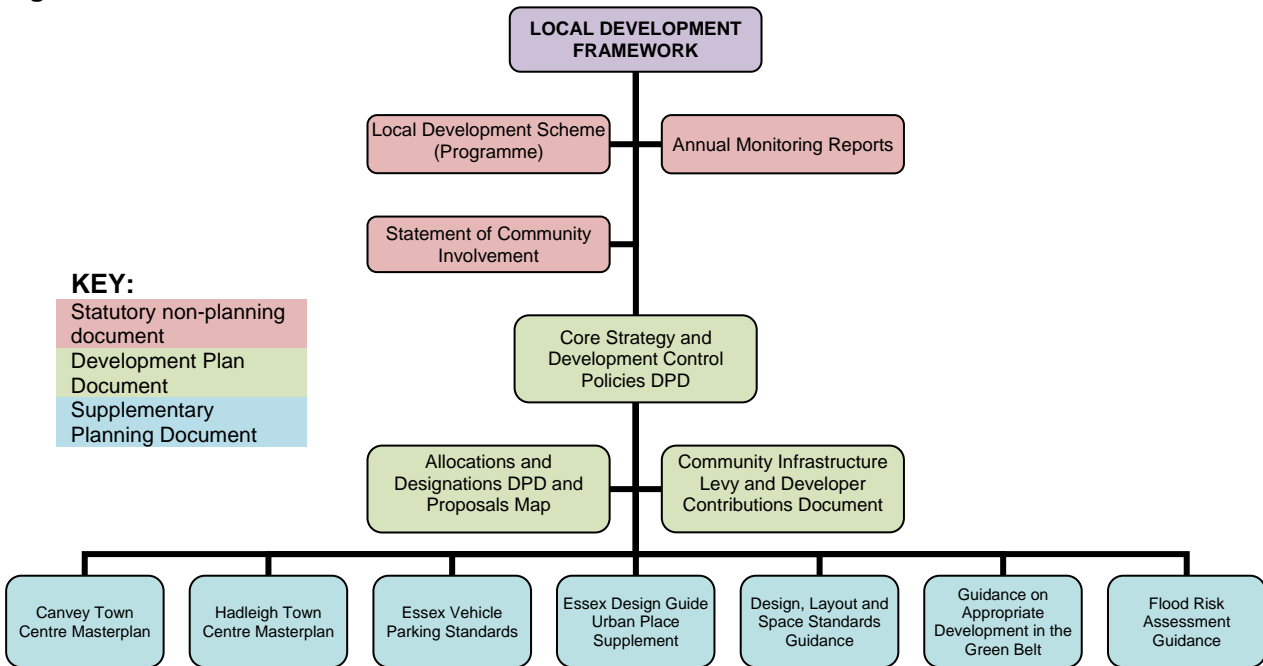
The Canvey Town Centre Masterplan (CTCMP) is part of the Borough's Local Development Framework (LDF). The LDF sets out planning policies for the borough in a suite of documents known as Development Plan Documents (DPDs) and Supplementary Planning Documents (SPDs). Development Plan Documents, including the Core Strategy and Allocations Documents set out the key policies for development in the borough. These are subject to independent examination. Meanwhile, SPDs set out guidance on how development should be delivered. The role of the CTCMP will be to guide development within Canvey Town Centre to achieve regeneration ambitions. Figure 1 sets out the suite of documents that have been or will be prepared to form Castle Point's LDF.

To date, work has been undertaken on the Core Strategy which sets out the overarching strategy and policies for the distribution of development in Castle Point. This was submitted to the Secretary of State for examination in public in March 2010. The Inspectors Report on this document is due in July 2011. The CTCMP should be in general conformity with this document.

Work has also been undertaken on the Essex Vehicle Parking Standards, and the Essex Design Guide Urban Place Supplement. The Council has adopted both of these documents as supplementary planning documents.

Work is currently underway on the Hadleigh Town Centre Masterplan. Work on this plan is running approximately 9 months behind the CTCMP. Work is also underway to put in the place the foundations for the Allocations Document and the Community Infrastructure Levy and Developer Contributions Document. The Sustainability Appraisal Baseline Report prepared for this sustainability appraisal will also be used for the sustainability appraisal of those documents.

**Figure 1: Castle Point LDF**



## The Canvey Town Centre Masterplan

The Canvey Town Centre Masterplan has been prepared by consultants BDP on behalf of the Castle Point Regeneration Partnership. This Partnership comprises of a range of organisations responsible for delivering social, economic, environmental and physical regeneration in Castle Point. Castle Point Borough Council, the local planning authority, has been asked to adopt the CTCMP as a supplementary planning document in order to assist in the delivery of the plan. The adoption of the CTCMP as an SPD will provide confidence to developers that the local planning authority support regeneration of Canvey Town Centre and this is important for achieving the physical change required.

The Canvey Town Centre Masterplan identifies a plan for the regeneration of Canvey Town Centre. It identifies how the town centre can be improved to create more retail floorspace, new jobs, more homes and better places for people to gather and enjoy the events, festivals, community activities and the outdoors. The masterplan sets out proposals for both private development in the town centre, and also for improvements to the public realm including the highway network. It was considered by the consultants that there was a need to improve both elements of the town centre in order to create a more successful town centre.

The overall plan for Canvey Town Centre has been the subject of extensive consultation with residents to ensure that it delivers a town centre they will be happy to use. The results of this consultation were used to both identify the objectives for the masterplan, and then also to select the preferred approach to regeneration of the town centre. The objectives for the masterplan are divided into thematic headings as follows:

### Canvey Town Centre Masterplan Objective

- O1 – Establish Canvey Town Centre as a destination while complimenting other attractions on the Island.
- O2 – Develop an holistic masterplan that proposes a healthy future for all areas of the Town Centres, both old and new.
- O3 – Create a compact retail destination at the heart of the island with modern retail space.
- O4 – Recognise and protect the valuable local independent retailers.
- O5 – Encourage movement between new and existing shopping areas to stimulate and

- maintain economic viability.
- O6 – Empower and activate the strong local community by improving access to and delivering the necessary facilities they need both now and in the future.
- O7 – Secure investment in the Town Centre to dramatically enhance the retail and service offer.
- O8 – Establish unique and indispensable roles for areas of the Town Centre to ensure success of new areas but not at the expense of old.
- O9 – Announce arrival into the Town Centre using gateways, landmarks, spaces and identity.
- O10 – Bring nature into the Town Centre and improve the environment.
- O11 – Ensure long term sustainability in the Town Centre through flexibility and the adaptability to future circumstances.

### **Canvey Town Centre Place Making Objectives**

- U1 – Create a series of destinations each with their own role, function and characteristics, but connected by strong linkages and a unifying identity.
- U2 – Deliver development to provide for a healthy retail led mixture of uses, creating a Town Centre that is vibrant during day and night.
- U3 – Ensure development is of the appropriate scale for Canvey Island and to deliver a people friendly environment.
- U4 – Deliver exceptional and lasting quality in the streets, spaces and buildings to develop a legacy befitting Canvey.
- U5 – Create places within the Town Centre to encourage visitors to come to Canvey for an experience.
- U6 – Provide strong linkages, both visually and physically between destinations with clear instinctive wayfinding.
- U7 – Achieve distinctive character in the built form and public realm.
- U8 – Develop proposals that balance the needs of the environment, people and vehicles.

### **Canvey Town Centre Spatial Objectives**

- S1 – Develop a series of public spaces providing destinations and space for outdoor events, festivals and town markets.
- S2 – Create strategic gateway spaces and announce arrival into the Town Centre.
- S3 – Create functional spaces where people can walk, cycle, sit and experience the space without barriers.
- S4 – Create spaces that are suitable for the current users while allowing for adaptation to future uses.
- S5 – Provide destinations for informal sports, play, relaxation, events and creativity.
- S6 – Link spaces with pedestrian friendly streets including safe crossings, places to sit and an uncluttered attractive footpath.
- S7 – Create a socially inclusive environment where all people feel comfortable as users.
- S8 – Establish a unique character and identity for the Town Centre, encapsulating history and heritage in contemporary style.
- S9 – Green the Town Centre with street trees, shrubs and lawns where appropriate.

### **Canvey Town Centre Movement Objectives**

- M1 – Create pleasant, calm Town Centre environment that is an attractive place for walking and cycling while allowing vehicle movement.
- M2 – Improve the public realm so the needs of all users of the town centre are met and which also reduces the dominance of moving vehicles.
- M3 – Promote non-car travel and improved health and well-being by increasing walking and cycling.
- M4 – Enhance access to services, employment, and other opportunities.
- M5 – Acknowledge the dual role of the road network in providing access to retail, employment and education, while serving as a through-route to other destinations on and off island.
- M6 – Create gateways that are linked to the key arrival points to ensure visitors to the



- Town Centre have positive first impressions.
- M7 – Provide quality signage in strategic locations to assist visitors and locals in navigating the Town Centre.
- M8 – Improve and better integrate bus and taxi operations into the Town Centre.

## Overview of the Sustainability Appraisal Process

The Sustainability Appraisal process involves the production of a report in two parts. The first part consists of the Scoping report and the second part consists of the actual sustainability appraisal of the Canvey Town Centre Masterplan.

The 'Scoping report' - forms the initial stage of the SA process and consists of baseline data collection and collection of information on other plans, policies and programmes that can have an influence on the production of the CTCMP. The data collected sets the context for the appraisal and helps to identify the key sustainability issues, objectives and targets for the area in question. This information will be used to set out a 'Sustainability Appraisal Framework'. This framework consists of sustainability objectives and targets which are used as a yardstick to measure the plan against.

The Sustainability Appraisal builds on the Scoping report in that it uses the Sustainability Appraisal Framework and identifies and evaluates the likely significant effects of the plan and requires systematic consideration of the options which make up the plan. Depending on the nature of the DPD, these can include:

- strategic objectives
- options
- preferred options / draft policies
- sites.

It is the intention of the Council to consult with Natural England, the Environment Agency and English Heritage, as well as other interest groups on this sustainability appraisal alongside consultation with the public on whether the masterplan should be adopted as an SPD. The purpose of this consultation will be to ensure that all relevant issues have been taken into account, and that the sustainability appraisal is robust. Typically this consultation would have taken place at an earlier stage in the production of the masterplan; however it was not until 2011 that the Council decided that it wished to adopt the masterplan as an SPD. A sustainability appraisal had not previously been required.

The stages of the report are briefly outlined in the table below.

<b>Scoping report</b>
<ul style="list-style-type: none"> <li>➤ Establishing a list of relevant plans and programmes</li> <li>➤ A baseline study of the environment</li> <li>➤ Identify sustainability issues related to the focus and scale of the plan</li> <li>➤ Setting sustainability objectives</li> <li>➤ Test the DPD objectives against the sustainability objectives, indicators and targets.</li> </ul>
<b>Sustainability Appraisal</b>
<ul style="list-style-type: none"> <li>➤ Assessing the options</li> <li>➤ Detailed assessment of preferred option</li> </ul>
<b>Monitoring</b>
<ul style="list-style-type: none"> <li>➤ Establishing a monitoring framework.</li> </ul>
<b>Consultation and Amendment</b>
<ul style="list-style-type: none"> <li>➤ Undertake consultation on the Scoping Report, Sustainability Appraisal and Monitoring Framework and amend as appropriate.</li> </ul>

## Background to Sustainability Appraisal

Strategic Environmental Assessment (SEA) is a process of identifying and evaluating the environmental impacts of a plan or programme. In 2001, the European Union adopted Directive 2001/42/EC on the assessment of the effects of certain plans and programmes on the environment.

The Directive came into force in the UK on 21 July 2004 and applies to a range of English plans and programmes including Local Development Frameworks (LDFs).

Sustainability Appraisal (SA) extends the concept of SEA to include economic and social concerns. Under the Planning and Compulsory Purchase Act 2004, Local Authorities must undertake SA for each of their Development Plan Documents (DPDs). SA is therefore a statutory requirement for LDFs along with SEA.

Guidance on the preparation of SA is contained in the CLG Plan Making Manual (replacing the previous 2005 ODPM guidance for development plan documents)<sup>1</sup>. Further guidance on the SEA Directive is also available<sup>2</sup>. The approach in the guidance is to incorporate the requirements of the SEA Directive into a wider Sustainability Appraisal process.

This SA report will need to consider taking into account the Core Strategy and other documents in the Local Development Framework, and should also be considered alongside other assessments such as the Habitat Regulations Assessment<sup>3</sup> and Equality Impacts Assessment. These assessments are distinct and separate to that of the SA/ SEA process however the findings can be integrated within the SA where appropriate.

## Methodology

The SA process is set out in the CLG Plan Making Manual<sup>4</sup> published to accompany PPS12. The methodology adopted, should seek to meet the requirements of both SA and SEA for the environmental assessment of plans. It should be started as soon as a new or revised local development document is first considered, and should provide input at each stage when decisions are taken. In order for SA to be effective, it should be fully integrated into the plan-making process.

As explained in the introduction, the Canvey Town Centre Masterplan was prepared by consultants on behalf of the Castle Point Regeneration Partnership in 2009. The Regeneration Partnership subsequently decided that it was necessary for the Local Planning Authority, Castle Point Borough Council, to adopt the masterplan as a Supplementary Planning Document in order to promote greater certainty amongst potential investors in the town centre. This decision was made in early 2011. As a consequence, the SA process and the production of the masterplan have not been fully integrated as would normally be expected.

Whilst the preparation of the Sustainability Appraisal and the Masterplan have not been integrated, Castle Point Borough Council recognise that they have a responsibility to ensure that the any plans that it adopt do not have negative consequences for sustainability and the environment, and wherever possible promote high standards of sustainability and positive outcomes for the environment. To this end, a full sustainability appraisal has been prepared of the Canvey Town Centre Masterplan. The sustainability appraisal will be used to inform the decision as to whether the Canvey Town Centre Masterplan should be adopted as supplementary planning guidance, and if so whether there is the need to caveat the Adoption Statement in order to improve the sustainability outcomes of the masterplan.

Figure 2, which follows, shows the methodology applied in preparing the sustainability appraisal of the Canvey Town Centre Masterplan. Whilst this varies from the standard methodology applied, it contains all of the required elements in order to ensure that a robust appraisal is prepared before a decision is made on the adoption of the Canvey Town Centre Masterplan.

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<sup>1</sup> <http://www.pas.gov.uk/pas/core/page.do?pagelid=152450>

<sup>2</sup> A Practical Guide to the Strategic Environmental Assessment Directive (ODPM 2006)

<sup>3</sup> Natura 2000 Sites – require an assessment of land use plans and whether they are likely to have a significant effect on a Natura site (either alone or in combination with other plans and projects). If it does then, it will need to carry out a full Habitats Regulations Assessment.

<sup>4</sup> <http://www.pas.gov.uk/pas/core/page.do?pagelid=152450>

**Figure 2: Stages of the SA report**

<b>Succeeding Sections</b>	<b>SA Stages</b>
<b>Scoping Report</b> <ul style="list-style-type: none"> <li>• Baseline Information</li> <li>• Plans and Programmes</li> <li>• Significant sustainability issues</li> <li>• Difficulties and limitations of data collection</li> <li>• SA framework</li> <li>• Sustainability objectives and criteria</li> </ul>	<b>Stage A</b> <ul style="list-style-type: none"> <li>• Setting the context and objectives, establishing baseline and deciding on scope</li> </ul>
<b>Strategic Options</b> <ul style="list-style-type: none"> <li>• Alternatives Assessment</li> <li>• Compatibility Assessment</li> </ul>	<b>Stage B</b> <ul style="list-style-type: none"> <li>• Developing and refining options</li> </ul>
<b>Predicting impacts of preferred option</b> <ul style="list-style-type: none"> <li>• Detailed policy assessments</li> <li>• Cumulative, Synergistic and Secondary Effects and their causes</li> </ul>	<b>Stage C</b> - Appraising the effects of the masterplan
<b>Consulting on draft LDF and draft Sustainability Appraisal Report</b>	<b>Stage D</b> <ul style="list-style-type: none"> <li>• Consultation on the masterplan and draft Sustainability Appraisal Report</li> </ul>
<b>Implementation and Monitoring</b> <ul style="list-style-type: none"> <li>• Documenting the monitoring data</li> <li>• Managing the monitoring process</li> </ul>	<b>Stage E</b> <ul style="list-style-type: none"> <li>• Monitoring the implementation of the LDF</li> </ul>

## 2. Context Review

### Purpose of the Context Review

The section sets out the Context review, which is incorporated within Stage A of the sustainability appraisal process.

Evidence gathering is the first stage in preparing a development plan document. Where possible, the baseline for the sustainability appraisal should be developed using the existing local development framework evidence base. The evidence base should be explored to:

- identify any external social, environmental or economic objectives that should be reflected in the SA process;
- identify external factors, such as sustainability issues, that might influence the preparation of the plan; and
- determine whether the policies in other plans and programmes might lead to cumulative effects when combined with policies in the plan that is subject to the SA.

The Context review is prepared in two steps. Firstly by identifying the relevant policies/ plans/ programmes/strategies/initiatives considered relevant to the CTCMP and secondly, reviewing these to establish their implications for the CTCMP as well as for the SA. Therefore the content review meets the requirements of the SEA Directive to provide an outline of the contents, main objectives of the plan or programme and relationship with other relevant plans and programmes.

Relevant documents at international, national, regional and local level have been reviewed as set out in the table below.

**Figure 3: Table of Documents relevant to the Sustainability Appraisal**

Document	Coverage	Status	Objectives
<b>(New) Air Quality Framework Directive 2008/50/EC</b>	Europe	Legislation	Annex II of this directive sets out limits for air quality related to the following pollutants: <ul style="list-style-type: none"> <li>• Sulphur Dioxide;</li> <li>• Nitrogen Dioxide and other oxides of Nitrogen;</li> <li>• Particulate Matter (PM<sub>10</sub> and PM<sub>2.5</sub>);</li> <li>• Lead;</li> <li>• Benzene;</li> <li>• Carbon Monoxide.</li> </ul> This directive requires air quality management to take place where limits are exceeded.
<b>Water Framework Directive 2000/60/EC</b>	Europe	Legislation	All European waters in a good condition by 2015.
<b>PPS1: Delivering Sustainable Development</b>	National	Policy	PPS1 sets out the objectives for the planning system in England. These are: <ul style="list-style-type: none"> <li>• making suitable land available for development in line with economic, social and environmental objectives to improve people's quality of life;</li> <li>• contributing to sustainable economic development;</li> <li>• protecting and enhancing the natural and historic environment, the quality and character of the countryside, and existing communities;</li> <li>• ensuring high quality development through good and inclusive design, and the efficient use of resources; and,</li> <li>• ensuring that development supports existing communities and contributes to the creation of safe,</li> </ul>

			sustainable, liveable and mixed communities with good access to jobs and key services for all members of the community.
<b>PPS: Planning and Climate Change Supplement to PPS1</b>			<p>PPS Planning and climate change sets out the following objectives for planning for climate change in England:</p> <ul style="list-style-type: none"> <li>• make a full contribution to delivering the Government's Climate Change Programme and energy policies, and in doing so contribute to global sustainability;</li> <li>• in providing for the homes, jobs, services and infrastructure needed by communities, and in renewing and shaping the places where they live and work, secure the highest viable resource and energy efficiency and reduction in emissions;</li> <li>• deliver patterns of urban growth and sustainable rural developments that help secure the fullest possible use of sustainable transport for moving freight, public transport, cycling and walking; and, which overall, reduce the need to travel, especially by car;</li> <li>• secure new development and shape places that minimise vulnerability, and provide resilience, to climate change; and in ways that are consistent with social cohesion and inclusion;</li> <li>• conserve and enhance biodiversity, recognising that the distribution of habitats and species will be affected by climate change;</li> <li>• reflect the development needs and interests of communities and enable them to contribute effectively to tackling climate change; and</li> <li>• respond to the concerns of business and encourage competitiveness and technological innovation in mitigating and adapting to climate change.</li> </ul>
<b>PPS3: Housing</b>	National	Policy	<p>PPS3: Housing sets out the following objectives for planning for housing in England:</p> <ul style="list-style-type: none"> <li>• High quality housing that is well-designed and built to a high standard.</li> <li>• A mix of housing, both market and affordable, particularly in terms of tenure and price, to support a wide variety of households in all areas, both urban and rural.</li> <li>• A sufficient quantity of housing taking into account need and demand and seeking to improve choice.</li> <li>• Housing developments in suitable locations, which offer a good range of community facilities and with good access to jobs, key services and infrastructure.</li> <li>• A flexible, responsive supply of land – managed in a way that makes efficient and effective use of land, including re-use of previously-developed land, where appropriate.</li> </ul>
<b>PPS4: Planning for Sustainable Economic Growth</b>	National	Policy	<p>PPS4: Planning for sustainable economic growth sets out the following objectives for planning for a prosperous and sustainable economy:</p> <ul style="list-style-type: none"> <li>• Build prosperous communities by improving the economic performance of cities, towns, regions, sub-regions and local areas, both urban and rural;</li> <li>• Reduce the gap in economic growth rates between regions, promoting regeneration and tackling deprivation;</li> <li>• Deliver more sustainable patterns of development,</li> </ul>

			<p>reduce the need to travel, especially by car and respond to climate change;</p> <ul style="list-style-type: none"> <li>• Promote the vitality and viability of town and other centres as important places for communities. To do this, the Government wants:             <ul style="list-style-type: none"> <li>○ new economic growth and development of main town centre uses to be focused in existing centres, with the aim of offering a wide range of services to communities in an attractive and safe environment and remedying deficiencies in provision in areas with poor access to facilities;</li> <li>○ competition between retailers and enhanced consumer choice through the provision of innovative and efficient shopping, leisure, tourism and local services in town centres, which allow genuine choice to meet the needs of the entire community (particularly socially excluded groups);</li> <li>○ the historic, archaeological and architectural heritage of centres to be conserved and, where appropriate, enhanced to provide a sense of place and a focus for the community and for civic activity.</li> </ul> </li> <li>• Raise the quality of life and the environment in rural areas by promoting thriving, inclusive and locally distinctive rural communities whilst continuing to protect the open countryside for the benefit of all.</li> </ul>
<p><b>PPS5: Planning for the Historic Environment</b></p>	<p>National</p>	<p>Policy</p>	<p>PPS5: Planning for the Historic Environment sets out objectives for how the historic environment should be planned for and treated when planning decisions are made. The objectives are as follows:</p> <ul style="list-style-type: none"> <li>• to deliver sustainable development by ensuring that policies and decisions concerning the historic environment:             <ul style="list-style-type: none"> <li>○ recognise that heritage assets are a non-renewable resource;</li> <li>○ take account of the wider social, cultural, economic and environmental benefits of heritage conservation; and</li> <li>○ recognise that intelligently managed change may sometimes be necessary if</li> <li>○ heritage assets are to be maintained for the long term.</li> </ul> </li> <li>• to conserve England’s heritage assets in a manner appropriate to their significance by ensuring that:             <ul style="list-style-type: none"> <li>○ decisions are based on the nature, extent and level of that significance, investigated to a degree proportionate to the importance of the heritage asset;</li> <li>○ wherever possible, heritage assets are put to an appropriate and viable use that is consistent with their conservation;</li> <li>○ the positive contribution of such heritage assets to local character and sense of place is recognised and valued; and</li> <li>○ consideration of the historic environment is integrated into planning policies, promoting place-shaping.</li> </ul> </li> <li>• to contribute to our knowledge and understanding of our past by ensuring that opportunities are taken to capture evidence from the historic environment and to make this publicly available, particularly where a</li> </ul>

			heritage asset is to be lost.
<b>PPS9: Biodiversity and Geological Conservation</b>	National	Policy	<p>PPS9: Biodiversity and Geological Conservation sets out the Governments objectives for conserving biodiversity and geology through the planning process. These objectives are:</p> <ul style="list-style-type: none"> <li>• <b>to promote sustainable development</b> by ensuring that biological and geological diversity are conserved and enhanced as an integral part of social, environmental and economic development, so that policies and decisions about the development and use of land integrate biodiversity and geological diversity with other considerations.</li> <li>• <b>to conserve, enhance and restore the diversity of England’s wildlife and geology</b> by sustaining, and where possible improving, the quality and extent of natural habitat and geological and geomorphological sites; the natural physical processes on which they depend; and the populations of naturally occurring species which they support.</li> <li>• <b>to contribute to rural renewal and urban renaissance by:</b> <ul style="list-style-type: none"> <li>○ enhancing biodiversity in green spaces and among developments so that they are used by wildlife and valued by people, recognising that healthy functional ecosystems can contribute to a better quality of life and to people’s sense of well-being; and</li> <li>○ ensuring that developments take account of the role and value of biodiversity in supporting economic diversification and contributing to a high quality environment.</li> </ul> </li> </ul>
<b>PPG17: Planning for open space, sport and recreation</b>	National	Policy	<p>PPG17 sets out the following objectives for planning for open space, sport and recreation:</p> <ul style="list-style-type: none"> <li>• <b>supporting an urban renaissance</b> - local networks of high quality and well managed and maintained open spaces, sports and recreational facilities help create urban environments that are attractive, clean and safe. Green spaces in urban areas perform vital functions as areas for nature conservation and biodiversity and by acting as 'green lungs' can assist in meeting objectives to improve air quality.</li> <li>• <b>supporting a rural renewal</b> - the countryside can provide opportunities for recreation and visitors can play an important role in the regeneration of the economies of rural areas. Open spaces within rural settlements and accessibility to local sports and recreational facilities contribute to the quality of life and well being of people who live in rural areas.</li> <li>• <b>promotion of social inclusion and community cohesion</b> - well planned and maintained open spaces and good quality sports and recreational facilities can play a major part in improving people's sense of well being in the place they live. As a focal point for community activities, they can bring together members of deprived communities and provide opportunities for people for social interaction.</li> <li>• <b>health and well being</b> - open spaces, sports and recreational facilities have a vital role to play in promoting healthy living and preventing illness, and in</li> </ul>



			<p>the social development of children of all ages through play, sporting activities and interaction with others.</p> <ul style="list-style-type: none"> <li>• <b>promoting more sustainable development</b> - by ensuring that open space, sports and recreational facilities (particularly in urban areas) are easily accessible by walking and cycling and that more heavily used or intensive sports and recreational facilities are planned for locations well served by public transport.</li> </ul>
<b>PPG19: Outdoor Advertisement Control</b>	National	Policy	PPG19 seeks for everyone involved in the display of outdoor advertising to contribute positively to the appearance of an attractive and cared-for environment in cities, towns and the countryside.
<b>PPS22: Renewable Energy</b>	National	Policy	PPS22 indicates that increased development of renewable energy resources is vital to facilitating the delivery of the Government's commitments on both climate change and renewable energy.
<b>PPS23: Planning and Pollution Control</b>	National	Policy	PPS23 promotes the application of key principles of European Law: <ul style="list-style-type: none"> <li>• Living within Environmental Limits;</li> <li>• Precautionary Principle;</li> <li>• Polluter Pays.</li> </ul>
<b>PPG24: Planning and Noise</b>	National	Policy	The planning system should ensure that, wherever practicable, noise-sensitive developments are separated from major sources of noise (such as road, rail and air transport and certain types of industrial development). It is equally important that new development involving noisy activities should, if possible, be sited away from noise-sensitive land uses.
<b>PPS25: Development and Flood Risk</b>	National	Policy	The aims of planning policy on development and flood risk are to ensure that flood risk is taken into account at all stages in the planning process to avoid inappropriate development in areas at risk of flooding, and to direct development away from areas at highest risk. Where new development is, exceptionally, necessary in such areas, policy aims to make it safe without increasing flood risk elsewhere and where possible, reducing flood risk overall.
<b>Safer Places: The Planning System and Crime Prevention</b>	National	Guidance	This document identifies seven attributes of places that should be considered in order to make them safer: <ul style="list-style-type: none"> <li>• <b>Access and movement:</b> places with well defined routes, spaces and entrances that provide for convenient movement without compromising security;</li> <li>• <b>Structure:</b> places that are structured so that different uses do not cause conflict;</li> <li>• <b>Surveillance:</b> places where all publicly accessible spaces are overlooked;</li> <li>• <b>Ownership:</b> places that promote a sense of ownership, respect, territorial responsibility and community;</li> <li>• <b>Physical protection:</b> places that include necessary, well-designed security features;</li> <li>• <b>Activity:</b> places where the level of human activity is appropriate to the location and creates a reduced risk of crime and a sense of safety at all times;</li> <li>• <b>Management and maintenance:</b> places that are designed with management and maintenance in mind, to discourage crime in the present and the future.</li> </ul>



<b>CABE: Good Design – the Fundamentals</b>	National	Guidance	<p>This guidance from CABE identifies that buildings and public spaces are well designed if:</p> <ul style="list-style-type: none"> <li>• they are useful, built to last , and easy to care for.</li> <li>• you can find your way and move around easily, regardless of whether or not you are disabled, in a place in which you feel safe.</li> <li>• they relate well to the place where they are built; this might mean fitting in quietly or creating new context and new landmarks, depending on circumstances.</li> <li>• they are flexible and their use can change over time.</li> <li>• they are environmentally efficient and will help us all to live and work sustainably.</li> <li>• the people who use them tell you that they help them to work more effectively and deliver services more efficiently.</li> <li>• the people who live there tell you that their quality of life has improved, and they continue to say this over time.</li> <li>• people tell you that they are proud of where they live because their building or place has real identity, character and beauty.</li> </ul>
<b>Delivering Great Places to Live: Building for Life</b>	National	Guidance	<p>This guidance sets out 20 Building for Life criteria embodying a vision of what housing developments should be: attractive, functional and sustainable.</p>
<b>Code For Sustainable Homes</b>	National	Guidance	<p>This is a national standard for use in the design and construction of new homes with a view to encouraging continuous improvement in sustainable home building.</p>
<b>East of England Plan</b>	Regional	Development Plan	<p>The East of England Plan set out the following objectives for development in the East of England:</p> <p>(i): To reduce the region's impact on, and exposure to, the effects of climate change by:</p> <ul style="list-style-type: none"> <li>• locating development so as to reduce the need to travel;</li> <li>• effecting a major shift in travel away from car use towards public transport, walking and cycling;</li> <li>• maximising the energy efficiency of development and promoting the use of renewable and low carbon energy sources; and</li> <li>• reducing the risk of adverse impact of flooding on people, property and wildlife habitats.</li> </ul> <p>(ii): To address housing shortages in the region by:</p> <ul style="list-style-type: none"> <li>• securing a step change in the delivery of additional housing throughout the region, particularly the key centres for development and change; and</li> <li>• giving priority to the provision of affordable housing to meet identified needs.</li> </ul> <p>(iii): To realise the economic potential of the region and its people by:</p> <ul style="list-style-type: none"> <li>• facilitating the development needed to support the region's business sectors and clusters, improving skills and widening opportunities in line with the Regional Economic Strategy;</li> <li>• providing for job growth broadly matching increases in housing provision and improving the alignment between the locations of workplaces and</li> </ul>

			<p>homes;</p> <ul style="list-style-type: none"> <li>• maintaining and strengthening the East of England's inter-regional connections by improving access to economic opportunities in London; and</li> <li>• ensuring adequate and sustainable transport infrastructure.</li> </ul> <p>(iv): To improve the quality of life for the people of the region by:</p> <ul style="list-style-type: none"> <li>• ensuring new development fulfils the principles of sustainable communities, providing a well designed living environment adequately supported by social and green infrastructure;</li> <li>• promoting social cohesion by improving access to work, services and other facilities, especially for those who are disadvantaged;</li> <li>• maintaining cultural diversity while addressing the distinctive needs of each part of the region;</li> <li>• promoting regeneration and renewal of disadvantaged areas; and</li> <li>• increasing community involvement in the implementation of the strategy at the local level.</li> </ul> <p>(v): To improve and conserve the region's environment by:</p> <ul style="list-style-type: none"> <li>• ensuring the protection and enhancement of the region's environmental assets, including the built and historic environment, landscape and water;</li> <li>• re-using previously developed land and seeking environmental as well as development gains from the use of previously undeveloped land;</li> <li>• protecting and, where appropriate, enhancing biodiversity through the protection of habitats and species and creating new habitats through development;</li> <li>• providing a network of accessible multi-functional greenspace; and</li> <li>• reducing the demand for and use of water and other natural resources and reducing waste, whilst increasing the sustainable management of waste.</li> </ul>
<b>Essex Design Guide Urban Place Supplement</b>	County	Guidance	This guidance attempts to help deliver a consistently higher standard of environmentally and contextually sensitive design within the urban areas of Essex.
<b>Essex County Council Guide to Developer Contributions</b>	County	Guidance	This guidance seeks to indicate the scope and range of financial contributions towards infrastructure that the County Council will seek in order to make development acceptable in planning terms. Funding is sought in respect of a range of county provided services including education, highways and transportation, adult social care, libraries and childcare services.
<b>Essex Schools Organisation Plan</b>	County	Plan	Furtherwick Park School on Canvey is due to close in 2011. Castle View School is being reconstructed at the Furtherwick Park School site with 300 extra places. This is being done to align supply of school places with projected demand more closely.
<b>Thames Gateway South Essex Green Grid Strategy</b>	Sub-region	Plan	<p>The Green Grid Strategy sets out the following objectives for planning delivering Green infrastructure across the sub-region:</p> <ul style="list-style-type: none"> <li>• enable a diversity of wildlife habitats and landscapes in town and countryside;</li> <li>• connect new communities with existing</li> </ul>

			<p>neighbourhoods, the regenerated riverside, local attractions and the countryside, providing improved “access for all”;</p> <ul style="list-style-type: none"> <li>• conserve and enhance existing green space and links;</li> <li>• create high quality new green space and links in areas of opportunity and need;</li> <li>• contribute to flood management, improved air and water quality and noise abatement;</li> <li>• create a sense of place through enhancement of landscape character and heritage;</li> <li>• enhance the image and confidence in south Essex as a quality place to live, work and invest;</li> <li>• engage all communities in the planning, management and celebration of the network;</li> <li>• plan and promote the network as part of a sustainable transport system;</li> <li>• promote the network for recreation and tourism, education and healthy living.</li> </ul>
<b>Thames Gateway South Essex Partnership</b>	Sub-region	Mission Statement	The Thames Gateway South Essex Partnership aims to deliver a better quality of life for all those who live and work in the area, believing that through one strong voice it can effect change by improving South Essex for years to come. It is committed to helping deliver 55,000 new jobs and 43,800 new homes to the region by 2021 through regeneration.
<b>Castle Point Sustainable Community Strategy</b>	Borough	Plan	<p>The Sustainable Community Strategy has nine ambitions with associated targets:</p> <ol style="list-style-type: none"> <li>1) Learning for all –Increase the skills and qualifications score in Castle Point, (residence based) from 87.43 to 102 by 2021.</li> <li>2) Making our Environment greener and cleaner - Increase Castle Point’s environmental sustainability score from 92.67 (2006) to104.3 by 2021.</li> <li>3) Regenerating our local economy and places - Increase Castle Point’s economic competitiveness score from 57.92 (2006) to 88.91 by 2021.</li> <li>4) Having Fun - Increase the percentage of the adult population participating in at least 30 minutes of sport or active recreation, three times a week from 18.3% to 24% by 2021; and, increase satisfaction with play areas in Castle Point, for children and their carers by 2012.</li> <li>5) Becoming Healthier - Increase the average life expectancy at birth, of all residents from 79.45 to 80.3 years by 2021; and ensure that no ward in Castle Point is below the national average life expectancy, by 2021.</li> <li>6) Feeling safer - Reduce the extent to which anti-social behavioural issues are perceived to be a problem in Castle Point, from 35.7% to 25% by 2012; and increase the number of people who feel safe in Castle Point from 60.5% to 70.5% by 2012.</li> <li>7) Getting around - Reduce traffic congestion in Castle Point by 2021.</li> <li>8) Developing Stronger Communities - Increase the number of residents in Castle Point who feel able to influence decision making in their area from 20%</li> </ol>

			<p>to 25% by 2012.</p> <p>9) Meeting housing needs - Increase housing satisfaction rates – (all housing tenures) in the Borough by 2021.</p>
<b>Castle Point Regeneration Framework</b>	Borough	Plan	<p>The key priorities to be delivered through the Regeneration Framework are as follows:</p> <ul style="list-style-type: none"> <li>• Employment, Innovation and Economic Development</li> <li>• Town Centres</li> <li>• Education and Skills</li> <li>• Environment</li> <li>• Transport</li> <li>• Planning for Housing Growth</li> <li>• Health</li> <li>• Leisure and 2012 Olympics</li> </ul>
<b>Castle Point Adopted Local Plan</b>	Borough	Development Plan	<p>The Adopted Local Plan has the following stated aims:</p> <ul style="list-style-type: none"> <li>• <b>Aim 1-</b> To seek to include all open land which contributes to the Green Belt function within the Green Belt, whilst making provision for long term needs by the designation of areas of restraint beyond the urban edge, the use of which will be reassessed beyond 2001.</li> <li>• <b>Aim 2 -</b> To conserve and enhance the natural beauty of the Borough and protect its flora and fauna and their habitats.</li> <li>• <b>Aim 3-</b> To conserve and enhance the architectural and historic heritage of the Borough.</li> <li>• <b>Aim 4-</b> To only meet the level of housing provision contained in the Structure Plan up to 2001, on land already allocated for residential purposes or on land which would clearly benefit from historical commitments.</li> <li>• <b>Aim 5-</b> To allocate for residential purposes those sites within established residential areas which have been identified as having a significant adverse impact on local amenities, and to encourage the relocation of such non-conforming uses to more appropriate locations where possible.</li> <li>• <b>Aim 6 -</b> To provide sufficient employment land to meet the Structure Plan requirement and replace land lost to other uses within the Structure Plan period.</li> <li>• <b>Aim 7-</b> To encourage the provision of an appropriate range of shopping facilities to meet the needs of the local population.</li> <li>• <b>Aim 8-</b> To seek to improve the distribution and flow of traffic through and within the Borough by all modes of transport, paying special attention to improving access to and from Canvey Island.</li> <li>• <b>Aim 9-</b> To satisfy identified deficiencies through public and private sector co-operation, in a manner which is compatible with other planning and environmental policies.</li> <li>• <b>Aim 10 -</b> To work with providers and enables to secure the provision of essential community facilities in the interests of the well-being of all groups within the population.</li> <li>• <b>Aim 11 -</b> To restrain the establishment and expansion of hazardous installations in the Borough.</li> </ul>
<b>Castle Point</b>	Borough	Plan	This document sets out 19 objectives for future

<p><b>Submission Core Strategy</b></p>			<p>development in Castle Point:</p> <ol style="list-style-type: none"> <li>1) Secure a better mix of uses in Town Centres in Castle Point;</li> <li>2) Secure improved access to public transport provision throughout the Borough to achieve a modal shift away from car use;</li> <li>3) Ensure that new development makes prudent and efficient use of land and natural resources, and that infrastructure is sufficient to prevent harm to the natural environment;</li> <li>4) Protect the Green Belt from unnecessary and inappropriate development;</li> <li>5) Conserve and enhance local landscape character and biodiversity assets;</li> <li>6) Increase opportunities for sustainable recreation in the natural environment, avoiding harm to wildlife and habitats;</li> <li>7) Improve the quality of formal open spaces;</li> <li>8) Improve the quality of the historic environment and assets in Castle Point;</li> <li>9) Secure high quality sustainable design in all new development;</li> <li>10) Secure the redevelopment of vacant and/or derelict previously developed land;</li> <li>11) Deliver at least 18ha of additional employment development;</li> <li>12) Deliver 10,000m<sup>2</sup> of new retail floorspace;</li> <li>13) Deliver first class education facilities in Castle Point;</li> <li>14) Maintain a high level of protection from the risk of flooding and ensure that new development minimises flood risk and the effects of climate change;</li> <li>15) Seek a reduction in the level of risk posed by hazardous uses in Castle Point;</li> <li>16) Deliver first class healthcare facilities in Castle Point;</li> <li>17) Identify sufficient land for the timely delivery of new homes;</li> <li>18) 35% of new homes to be affordable to local people who do not have access to market value homes;</li> <li>19) Deliver specialist accommodation for older people and people with special needs.</li> </ol>
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This information has been used to inform the subsequent stages of the process, which are covered in later sections of this document, in particular the baseline review (stage A2), the identification of sustainability issues (stage A3) and the development of the Sustainability Appraisal Framework (stage A4).

## 3. Baseline review

### Introduction

This section of the report is a collation of information relating to the Borough of Castle Point. This information is intended to inform the Sustainability Appraisal (SA) incorporating the Strategic Environmental Assessment (SEA) of the next documents to be prepared as part of the LDF for the Borough, by describing the existing environmental, social and economic baseline of the area.

The information presented here is based on a desktop review of the area, as no primary research has been undertaken specifically for the SA. Various sources of information have been used. These are referenced throughout the report with weblinks to the source document/data provided in the footnotes.

Every reasonable effort has been made to acquire information to inform the environmental baseline for Castle Point. However, there are some instances where data has not been available, or else the data available is old. An example of this is some of the population data which is derived from the Census 2001. It is not likely that even the most basic Census 2011 data will be available until mid 2012 and therefore 2001 data is the only reasonable data source in some instances. In such instances, commentary on the availability of data, or on the reliability of data are included within the text.

Furthermore, the data collected is unlikely to refer to particular sites. For example the section on biodiversity identifies the location of European, national and locally designated sites, but does not provide any information on site surveys for specific species. This is because the purpose of this report is to provide an overview of environmental conditions to inform plan making as opposed to informing the consideration of a particular planning proposal.

The expectation will be for the SA to show that in making the development provision in the LDF, the Council has identified the environmental, social and economic consequences of the development of sites and identified whether the provision could be made with the use of other sites with less environmental harm or greater environmental benefit. The SEA Directive requires the LDF-making body to report on the environmental implications of the LDF however, not require them to make decisions for the LDF based on those implications. As this process is a SA, rather than a SEA, the baseline data collection has been widened to cover the full sustainability agenda, and this means considering social and economic implications in addition to environmental.

In establishing the baseline it is considered that there are likely to be some difficulties. These are:

- the possible lack of data regarding some areas of the environment;
- the possible lack of data at a level more detailed than borough-wide regarding some areas of the environment;
- the age of some data sources such as the Census;
- the deletion of the national indicator set, which will make some parts of the baseline difficult to monitor in the future;
- the difficulty of making links between the proposals and policy aspirations of the spatial plan and change in matters such as health and general well being.

The report is arranged around topic areas, covering (although in some cases combining) the list of topics found in Schedule 2 of the SEA Regulations, and then widened to include social and economic issues to ensure the full sustainability considerations are included. Although the topics are presented separately there is a high proportion of overlap and integration between them, for example biodiversity and landscape, flooding and climate change. At the end of each section there is a paragraph on the 'implications for the plan', which is necessary as the baseline information presented must be viewed with the intention of identifying how the LDF could impact upon the environmental feature through specific policies and proposals. This also considers how the plan area may evolve without the implementation of the LDF.



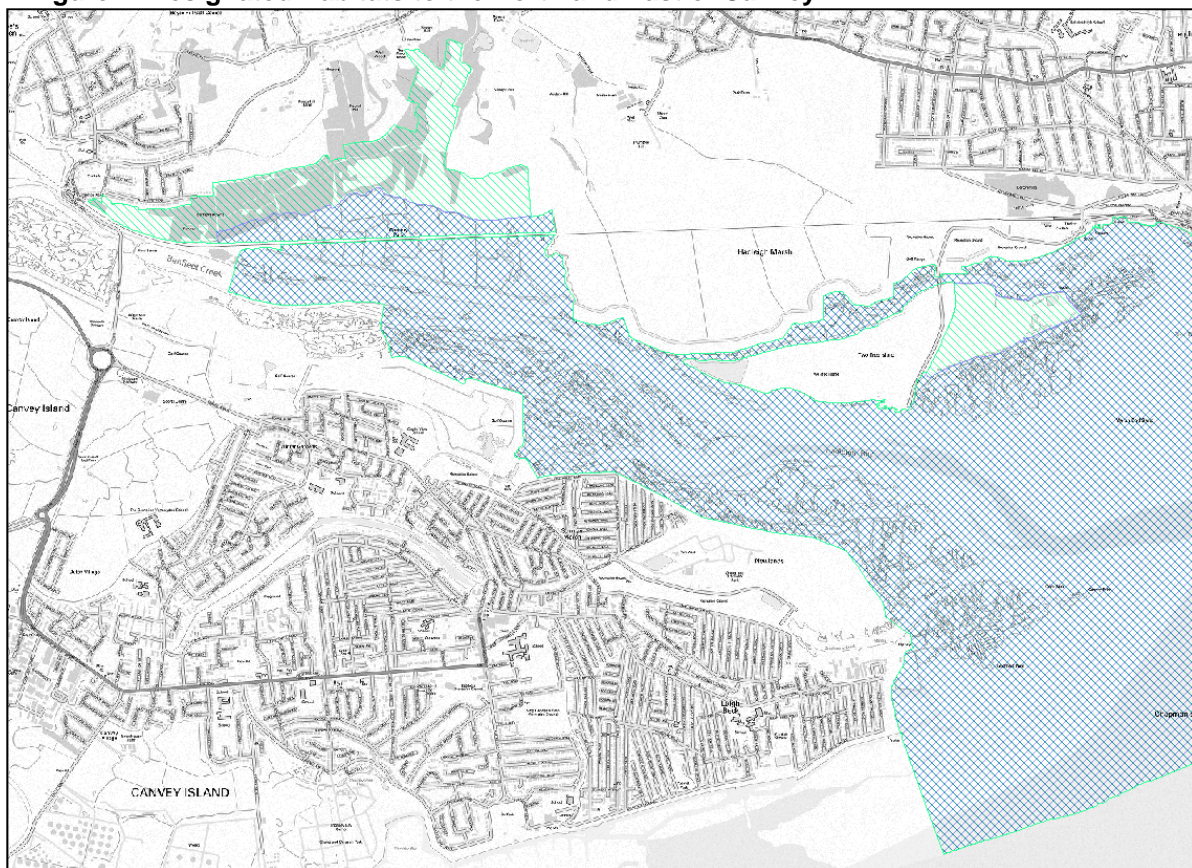
## Biodiversity

### Significant Areas of Nature Conservation

The estuary environment to the south of Castle Point is characterised by extensive mudflats and areas of saltmarsh, all of which are internationally important areas for nature conservation and biodiversity.

To the north and east of Canvey Island are the Benfleet and Southend-on-Sea Marshes. These are an internationally important protected wetland site under the Ramsar convention, a Special Protection Area (SPA), and a nationally important SSSI. The SSSI is made up of various habitat types including grassland and woodland, and predominantly littoral sediment. A key reason for the designation of this SSSI is due to its population of nationally uncommon plants occurring in all of the habitats and parts of the area are of outstanding importance for scarce invertebrates<sup>5</sup>. SSSI evaluation has shown that overall the condition of the SSSI is unfavourable. Whilst most of the unfavourable areas are recovering there are still two parts of the SSSI comprising of littoral sediment habitats that are in decline<sup>6</sup>. The area also has the non statutory designation of an ‘Important Bird Area’, by Birdlife International, as it supports good populations of several types of bird including, Brent Goose, Grey Plover, Redshank, Knot and Dunlin. Pressures on this area have been identified by Birdlife International, as being predominantly from natural events rather than current human activities, although aquaculture and fishing may have a minor impact.

**Figure 4: Designated Habitats to the North and East of Canvey**



Blue cross hatched – Ramsar, SPA and SSSI      Green diagonal lines – SSSI only

To the west of Canvey Island are extensive areas of open grassland and marshland. The Canvey Wick SSSI, to the south of Northwick Road, supports a nationally important assemblage of invertebrates, chiefly associated with herb-rich grassland, early successional habitat and scrub edge, and brackish (coastal wetland) habitats. The site also supports a nationally important population of the shrill carder bee *Bombus*

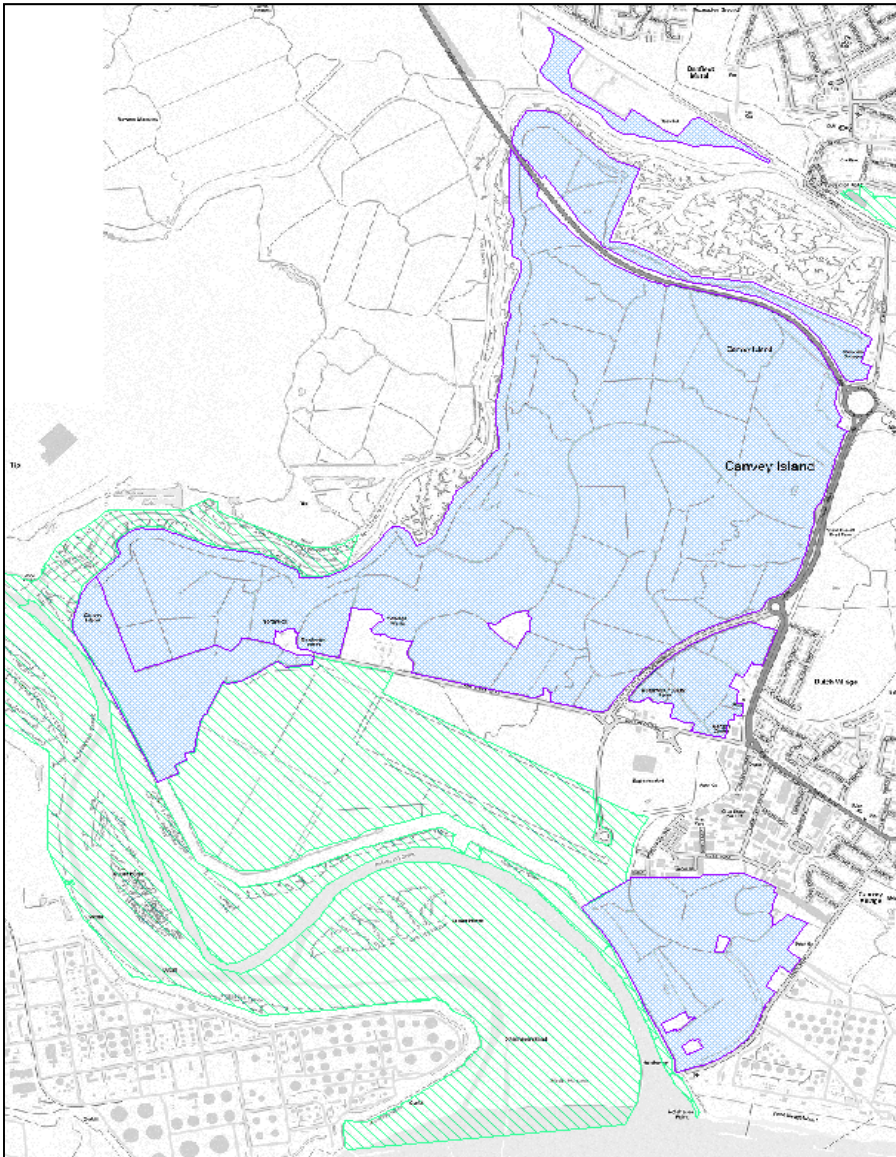
<sup>5</sup> Benfleet and Southend Marshes SSSI Citation [http://www.sssi.naturalengland.org.uk/citation/citation\\_photo/1004414.pdf](http://www.sssi.naturalengland.org.uk/citation/citation_photo/1004414.pdf)

<sup>6</sup> Benfleet and Southend Marshes Condition Summary <http://www.sssi.naturalengland.org.uk/Special/sssi/reportAction.cfm?report=sdrt18&category=S&reference=1004414>



*sylvanum*<sup>7</sup>. Canvey Wick SSSI is reported by Natural England as being in a favourable condition<sup>8</sup>. Holehaven Creek SSSI is also to the west of Canvey, comprising an area of marshland beyond the sea defences of the Island. Holehaven Creek is designated as a SSSI because it regularly supports nationally important numbers of wintering black-tailed godwit *Limosa limosa islandica*<sup>9</sup>. As with Canvey Wick SSSI, Holehaven Creek SSSI is also considered to be in a favourable condition by Natural England<sup>10</sup>.

**Figure 5: Designated Habitats at West Canvey**



In addition to nationally designated sites at West Canvey, there are also Local Wildlife Sites. Local Wildlife Sites have been identified across Essex using a methodology that considers the presence of biodiversity action plan species and habitats. Canvey Marshes to the north of Northwick Road is a grazing marsh grassland with a rich floral assemblage that supports a diversity of vertebrate species. It is considered to be in a good condition, having recently fallen into the ownership of the RSPB who have further developed the site as a bird habitat. Canvey Village Marsh, to the south of Charfleets Industrial Estate meanwhile is a complex old grazing marsh system, making it a scarce and declining Essex habitat. It supports a diverse flora assemblage including Birdsfoot Trefoil, and also populations of BAP species including the Shriill Carder Bee and Water Voles. The condition of this site was assessed as stable, although a major new road has recently been constructed in its northern section<sup>11</sup>.

Green Diagonal Lines – SSSI  
 Blue Diagonal Crosshatch – Local Wildlife Site

<sup>7</sup> Canvey Wick SSSI Citation [http://www.sssi.naturalengland.org.uk/citation/citation\\_photo/2000497.pdf](http://www.sssi.naturalengland.org.uk/citation/citation_photo/2000497.pdf)

<sup>8</sup> Canvey Wick Condition Summary

<http://www.sssi.naturalengland.org.uk/Special/sssi/reportAction.cfm?report=sdrt18&category=S&reference=2000497>

<sup>9</sup> Holehaven Creek SSSI Citation [http://www.sssi.naturalengland.org.uk/citation/citation\\_photo/2000467.pdf](http://www.sssi.naturalengland.org.uk/citation/citation_photo/2000467.pdf)

<sup>10</sup> Holehaven Creek Condition Summary

<http://www.sssi.naturalengland.org.uk/Special/sssi/reportAction.cfm?report=sdrt18&category=S&reference=2000467>

<sup>11</sup> Information on Local Wildlife Sites in Annex 2 of Local Wildlife Site Review 2007

<http://www.castlepoint.gov.uk/Documents/departments/Planning/devFramework/Annex%202.pdf>



**Figure 6: Thundersley Great Common SSSI**

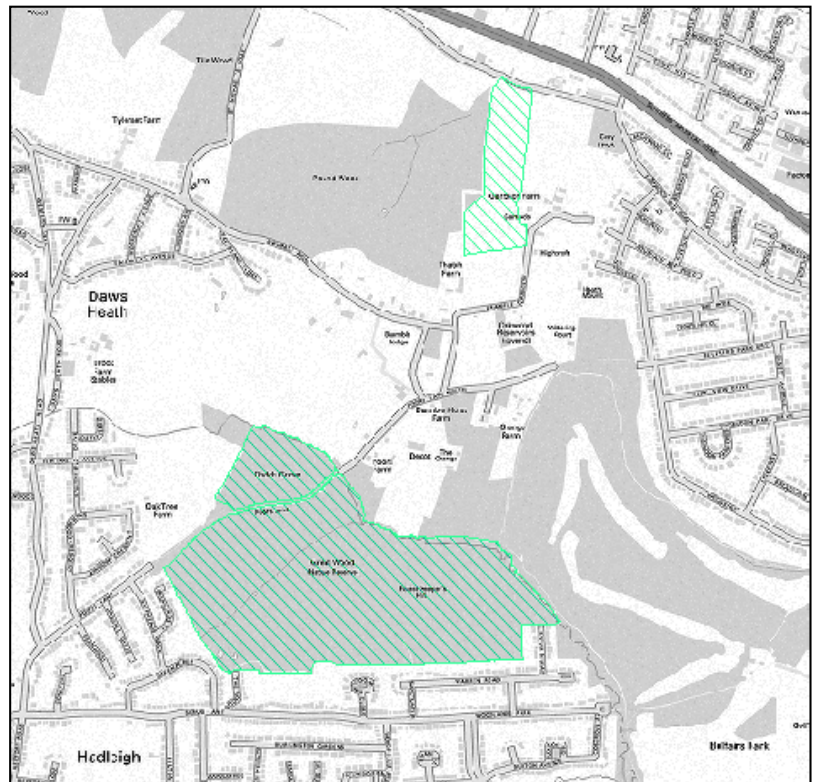


Green Diagonal Lines – SSSI

There are two further SSSI's in Castle Point located towards the north of the Borough. Thundersley Great Common is a rich mosaic of wet and dry heathland, merging with acid grassland. These habitats have a very restricted distribution in Essex, and therefore Thundersley Great Common supports a number of locally uncommon plant species<sup>12</sup>. A Habitat Management Plan has been put in place for this SSSI in recent years and as a result Natural England report that it is therefore in a favourable condition<sup>13</sup>.

**Figure 7: Great Wood and Dodd's Grove SSSI**

The other SSSI in Castle Point is Great Wood and Dodd's Grove. This SSSI is part of the ancient Hadleigh Great Wood. It is a large area of coppice-with-standards oak woodland lying on periglacial sands, gravels and clays. It is one of the largest and best examples of ancient woodland in South Essex and the last known stronghold of the rare Heath Fritillary butterfly<sup>14</sup>. Most of this SSSI is in a favourable condition; however there is a small area this is currently recovering from a period of poor management. Natural England report that the condition is generally favourable<sup>15</sup>.



Green Diagonal Lines - SSSI

<sup>12</sup> Thundersley Great Common SSSI Citation [http://www.sssi.naturalengland.org.uk/citation/citation\\_photo/1002282.pdf](http://www.sssi.naturalengland.org.uk/citation/citation_photo/1002282.pdf)

<sup>13</sup> Thundersley Great Common Condition Summary

<http://www.sssi.naturalengland.org.uk/Special/sssi/reportAction.cfm?report=sdr18&category=S&reference=1002282>

<sup>14</sup> Great Wood and Dodd's Grove SSSI Citation [http://www.sssi.naturalengland.org.uk/citation/citation\\_photo/1001885.pdf](http://www.sssi.naturalengland.org.uk/citation/citation_photo/1001885.pdf)

<sup>15</sup> Great Wood and Dodd's Grove Condition Summary

<http://www.sssi.naturalengland.org.uk/Special/sssi/reportAction.cfm?report=sdr18&category=S&reference=1001885>

In addition to significant areas of nature conservation in Castle Point, there are also such areas nearby in neighbouring districts. To the west of the Borough is Pitsea Marsh SSSI, whilst to the east Leigh Flats is designated as a National Nature Reserve.

### Important habitats in Castle Point Borough

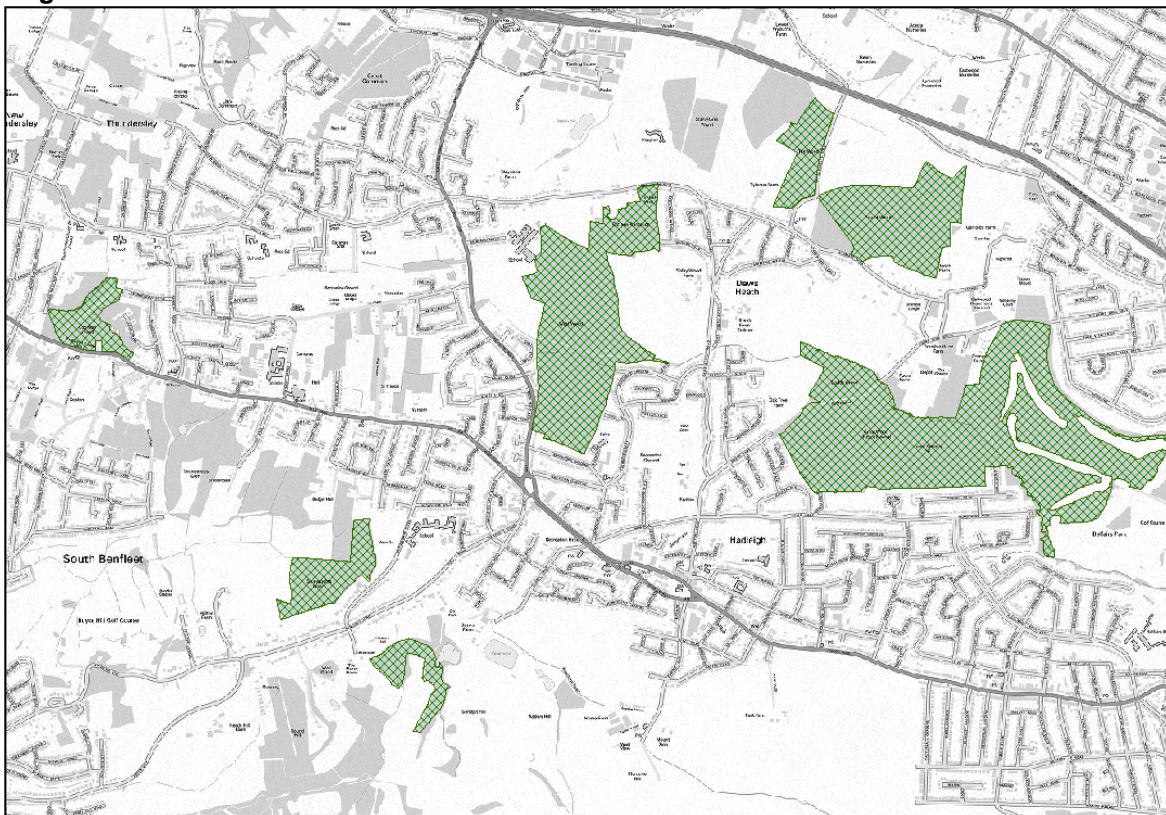
The Biodiversity Action Plan for Essex details the various habitats in the county and the species that rely on its abundance and quality, giving details of those habitats and areas under pressure. The following section gives details of the relevant habitats in Castle Point, and identifies where Local Wildlife Sites (LoWS) have been designated in respect of these habitats.

Hedgerows, more specifically ancient species poor hedges, are usually found at field boundaries. There are no LoWS in Castle Point designated for their Hedgerow. Eastwood Old Road LoWS was removed from the schedule due to damage to the Hedgerow in this location in 2007. However, the Thundersley Plotlands LoWS, Castle Farm/Hadleigh Castle Grasslands LoWS and Little Haven Complex/Tile Wood LoWS all comprise a mosaic of fields and paddocks where hedgerows can be found<sup>16</sup>.

Ancient species rich woodlands can be found in Castle Point. Ancient woodlands not only provide habitats for trees and mammals, but a wide variety of invertebrates, fungi and flora. Generally speaking protection for ancient woodlands is good in comparison to other types of habitat. In addition to the Great Wood and Dodd's Grove SSSI there are five other areas of ancient woodland in Castle Point. These are Pound Wood LoWS, West Wood LoWS, Nine Acre Wood LoWS, Shipwrights Wood LoWS and Coombe Wood LoWS.

In addition to the ancient species rich woodlands, a further nine areas of woodland in Castle Point that are identified as Local Wildlife Sites. These are: North Benfleet Wood, Kents Hill Wood, Thundersley Glen, Jervis Wood Lane, Coopers Wood, Cottage Plantation and Rag Wood, Tile Wood, Coxall Wood and Belfairs Park Wood. These woodlands contribute towards the wider network of woodland in south Essex<sup>17</sup>.

**Figure 8: Ancient Woodland in Castle Point**



Dark Green Diagonal Crosshatch – Ancient Woodland

<sup>16</sup> See footnote 11.

<sup>17</sup> See footnote 11.



Lowland Grazing Marsh is of particular relevance to Castle Point as set out in the previous section on north and east Canvey and west Canvey. This habitat is created by the periodic inundation of the areas by sea water and so includes areas of both fresh and brackish standing water.

Seagrass beds have important species flowering marine plants which although called ‘grasses’ are more like pondweeds. Eelgrass is especially important for birds such as Widgeons. Beds of Seagrass occur along the Essex coast and in the Borough including in the Benfleet and Southend Marshes Ramsar/SPA/SSSI Site.

British Lowland Heathland, There are areas of British Lowland Heathland located in the northern eastern parts of the Borough, these sites are generally isolated and smaller than 2ha and therefore require a high level of protection. Thundersley Great Common is the main site in Castle Point.

Saline Lagoons are generally natural or artificial bodies of water that fill at high tide and retain at least some of their water at low tide. These lagoons need protection from pollution and other damage that can possibly arise through the use of land. Two Tree Island Lagoon LoWS is an example of a saline lagoon in Castle Point<sup>18</sup>.

### **Other Habitats in Castle Point**

In addition to Biodiversity Action Plan habitats, there are also a number of Local Wildlife Sites in Castle Point that are designated because of the species they host. Two of these sites are bodies of freshwater with reedbeds – The Lake, Canvey Island LoWS, and Thorneycreek Fleet LoWS. The remainder are largely meadows, or grassland as listed below:

- Montgomery School Meadow LoWS;
- Rushbottom Lane Flood Pound LoWS;
- Benfleet Sewage Works LoWS;
- Fane Road Meadows LoWS;
- Vicarage Hill LoWS;
- Reed Hill Pasture LoWS;
- The Chase Paddocks LoWS;
- Shipwrights Meadow LoWS;
- Oakwood Reservoirs LoWS<sup>19</sup>.

In addition to specific nature conservation sites, the urban area of Castle Point also provides habitats for species, some of whom may be protected. Many of the homes in Castle Point have gardens, which are home to a whole host of wildlife including badgers, bats and invertebrates. They also provide an important source of food for birds such as robins, tits and finches. Significant reductions in the area of garden land may impact on urban biodiversity.

### **Change in the Condition of Biodiversity and Habitat**

With regard to SSSI's, annual condition statements prepared by Natural England reveal that management plans have been put in place to bring the condition of those sites in Castle Point to a favourable condition. There are only two units across all six sites that are in an unfavourable condition and declining. This is a substantial improvement on previous conditions. In 2005 94% of the Benfleet and Southend Marshes SSSI was in an unfavourable and declining condition. In 2011 only 7.7% remains in such a condition. 78% of this site is now in a favourable condition compared to just 5% in 2005<sup>20</sup>.

Local Wildlife Sites however appear to have fared less well. When the 2007 Wildlife Site Review is compared with the 2002 Wildlife Site Survey a total of around 20ha of Local Wildlife Site area was removed from the schedule as a result of degradation of habitat and loss of biodiversity. Proposals to develop part of the Thundersley Plotlands Local Wildlife Site for housing may see the area covered by Local Wildlife Site designations reduced by up to a further 8ha.

<sup>18</sup> See footnote 11.

<sup>19</sup> See footnote 11.

<sup>20</sup> Benfleet and Southend Marshes Condition Summary 2011

<http://www.sssi.naturalengland.org.uk/Special/sssi/reportAction.cfm?report=sdrt18&category=S&reference=1004414> compared to Baseline Report in SA Scoping for Core Strategy in 2005.

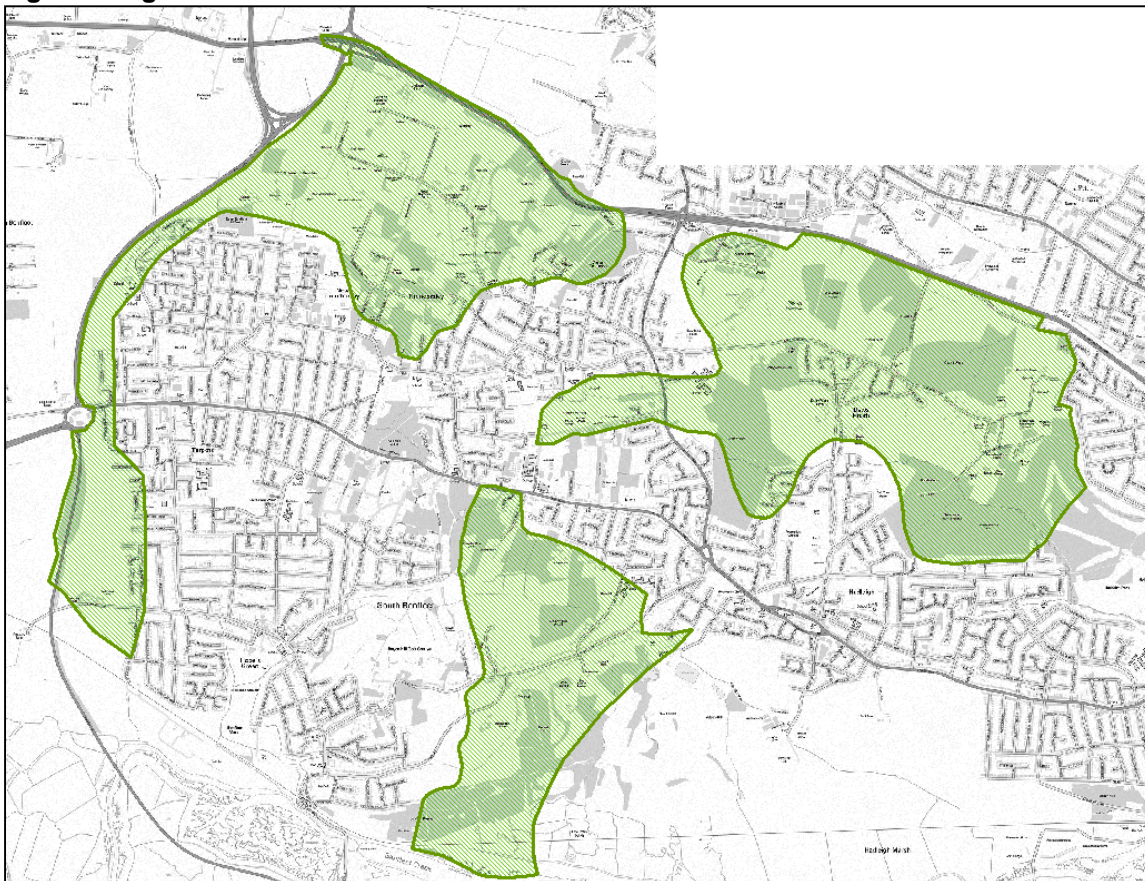
Whilst it is recognised that there is a decline in the quantity of Local Wildlife Sites in Castle Point, it does appear that climate change is potentially increasing some types of biodiversity in the area. For example the British Trust of Ornithology reported that Essex played host to a variety of bird species during the cold 2010/11 winter<sup>21</sup>. Data collected by the British Trust of Ornithology from bird watching organisations and the RSPB indicated that 127 species of bird were spotted in Castle Point during 2010. This is a substantial increase on previous years, but may be down in a large part to improvements in data collection rather than an actual increase in species present (See appendix 1 for full list).

**Implications for Planning:** *Castle Point has many important nature conservation features that need conservation including sites with international, European and national designations. This is a key consideration for consideration when identifying locations to accommodate growth. It is also important that gardens and other opportunities to encourage urban biodiversity are promoted in development schemes in order to support robust populations of birds, badgers, invertebrates and other species.*

## Agricultural Land

The Borough only contains a limited amount of undeveloped land mainly on the northern edge and to the west, some of which is used for agriculture. Studies have shown that the vast majority of this land is relatively low quality (Grade 3). There is no Grade 1 or 2 agricultural land in Castle Point.

**Figure 9: Agricultural Land in Castle Point**



Green - Grade 3 Agricultural Land

Using poor quality land for arable agriculture is more likely to require inputs of fertilisers to promote crop growth. The use of fertilisers has implications for nitrate levels, dissolved oxygen levels, and the levels of other chemicals in nearby watercourses. This may have a potentially negative impact on biodiversity and should be avoided.

<sup>21</sup> BTO Report 2011 <http://www.bto.org/node/2642>



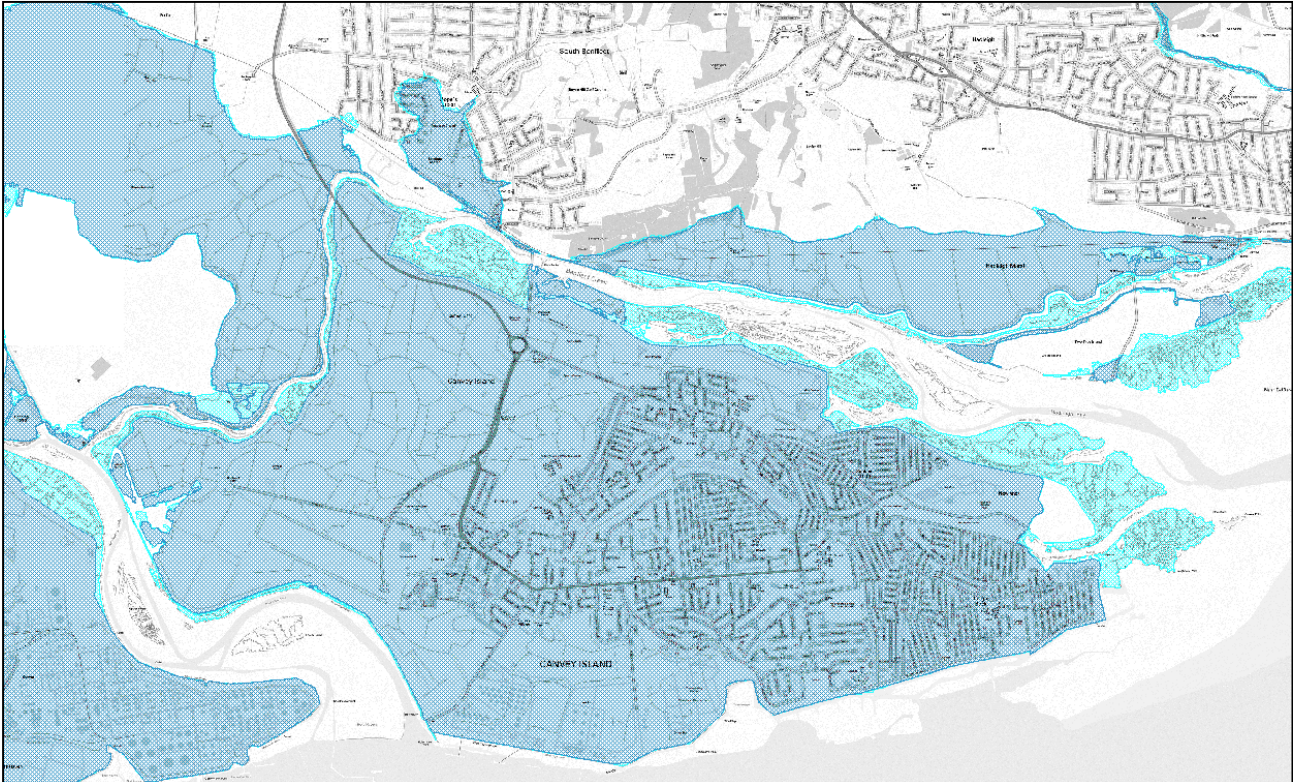
**Implications for the plan:** *There is very little need to protect this land for agricultural purposes given its quality. The poor quality of these soils, if used for arable agriculture may potentially cause harm to biodiversity, and therefore it may be appropriate to promote development on low grade agricultural land if it does not have a biodiversity value.*

## Flood Risk

### Tidal Flood Risk

Castle Point's estuary location means that a significant proportion of the borough's land area is at risk of tidal flooding as identified by the Environment Agency's flood risk zone maps.

**Figure 10: Environment Agency Flood Risk Zones in Castle Point**



Turquoise – Flood Risk Zone 2 Blue – Flood Risk Zone 3

This map indicates that the whole of Canvey Island, a substantial area of Hadleigh Marshes and South Benfleet Playing Fields are all at risk of tidal flooding. This map also indicates that there is a narrow area at risk of fluvial flooding from the Prittle Brook to the north east of the borough.

Whilst a large area of Castle Point is at risk of flooding, those areas at risk of tidal flooding are substantially protected by sea defences. As a result, with the exception of South Benfleet Playing Fields which acts as a functional flood plain (Zone 3b), the remainder of the area at risk of flooding is in flood risk zone 3a.

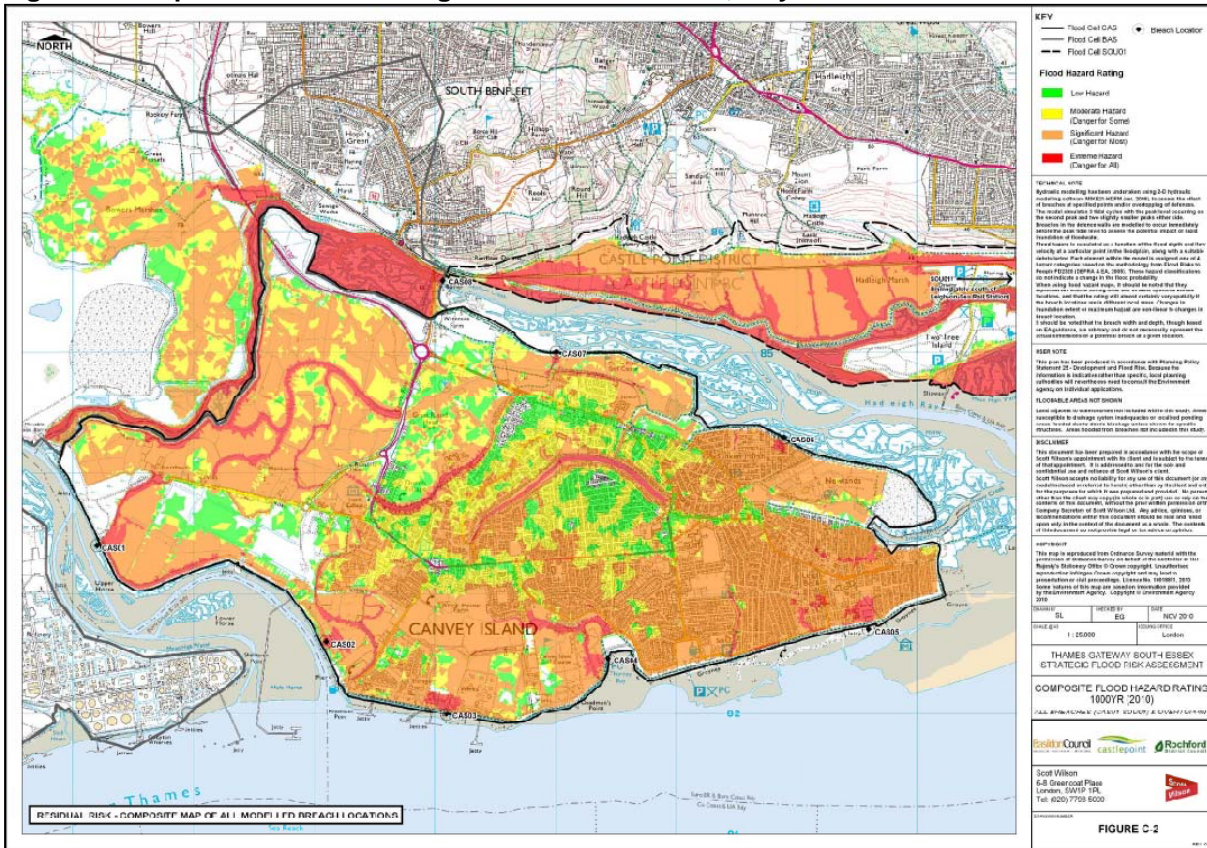
These flood defences are currently of a sufficient height and structure to defend against a 1 in 1,000 year high tide. Therefore any risk remaining is associated with a breach of the defences. An assessment has indicated that such a breach is unlikely to occur, however if it were to do so the consequences would be significant<sup>22</sup>. The map below indicates the hazard (calculated having regard to the depth of flooding and velocity of flood waters) of a breach of the sea defences during a 1 in 1,000 year high tide in the current day<sup>23</sup>.

<sup>22</sup> SFRA 2006

<sup>23</sup> SFRA Review 2010 <http://castlepoint.limehouse.co.uk/portal/planning/cs/sfra?pointId=1290779943400>



Figure 11: Map from SFRA showing the Hazard of a 1 in 1,000yr flood in 2010



Whilst the defences are currently considered sufficient to protect against flooding at high tide, it is predicted that as a result of climate change sea levels will rise. This has implications for the ongoing effectiveness of sea defences. Modelling of flood risk scenarios in 2110 (100 years time) taking into account the effects of climate change indicates that there is an actual risk of flooding occurring during both a 1 in 200 year high tide and a 1 in 1,000 year high tide<sup>24</sup>. The maps that follow indicate the hazard associated with each of these scenarios.

<sup>24</sup> See footnote 23.



Figure 12: Map from SFRA showing the Hazard of a 1 in 200yr flood in 2110

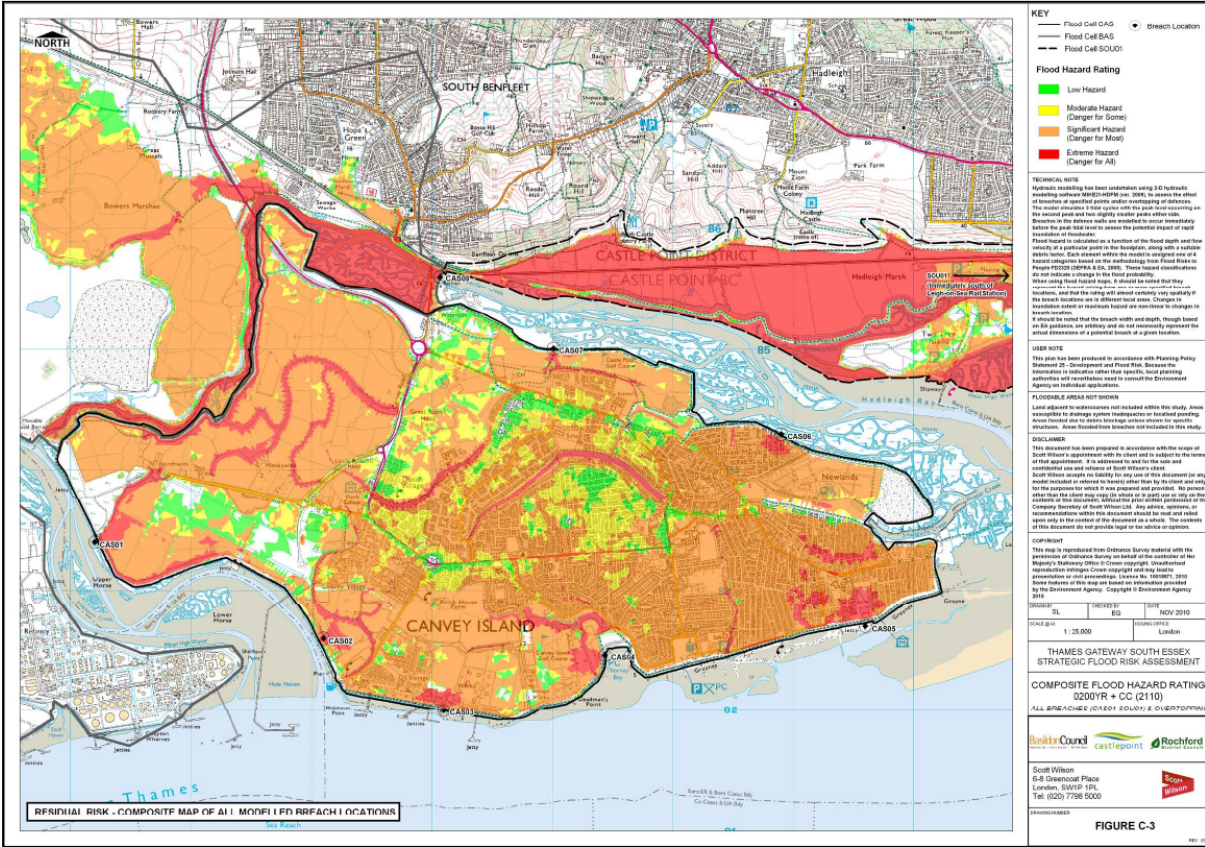
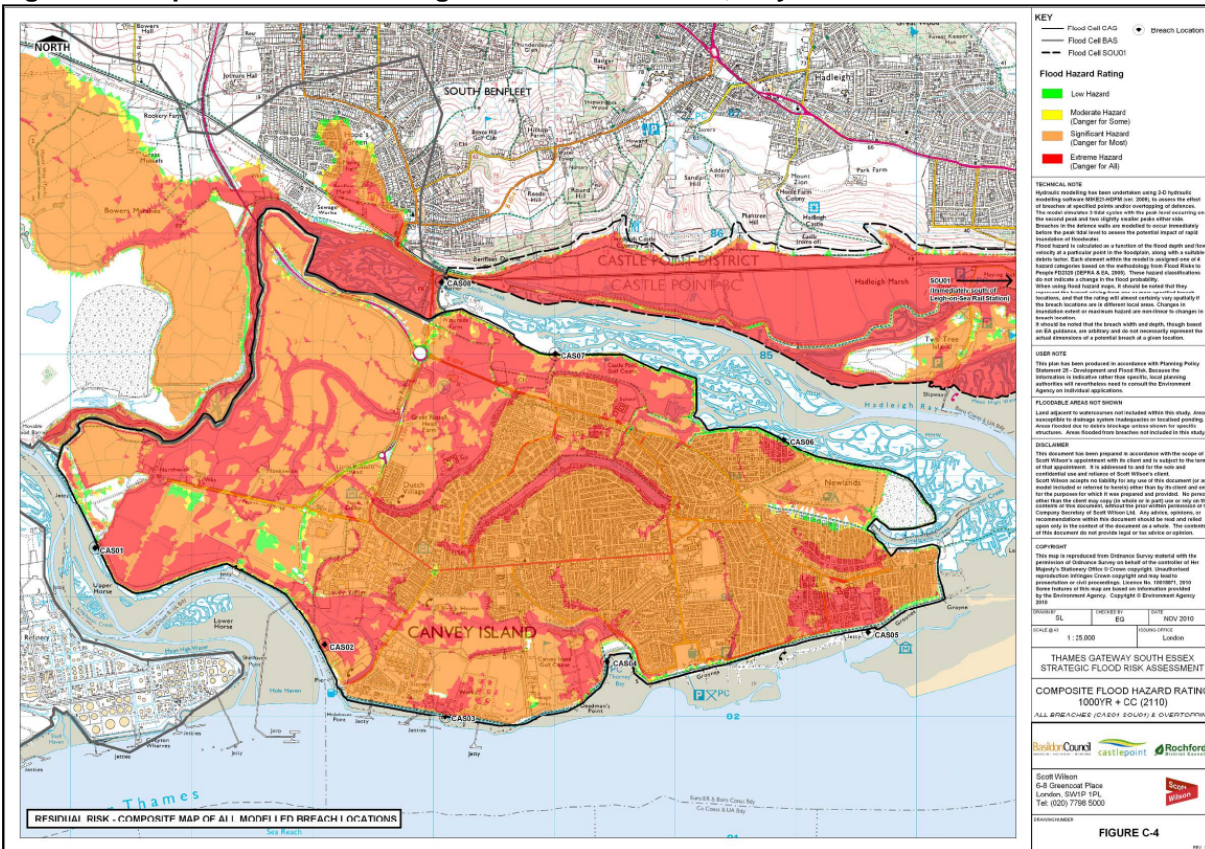


Figure 13: Map from SFRA showing the Hazard of a 1 in 1,000yr flood in 2110



Flood risk, particularly as the level of hazard it poses will increase over time, has significant implications for the borough. At present the entire population of Canvey Island live at risk of flooding. Many of these homes are bungalows and therefore residents would be unable to move to a higher level if a flood event was to occur. The Environment Agency has set out plans for managing flood risk in the Thames Estuary in the Thames Estuary 2100 Plan (TE2100). For Canvey Island this proposes a policy of maintaining and improving the flood defences in order to promote the existence of a sustainable population<sup>25</sup>.

Hadleigh Marshes is identified in the TE2100 Plan as an area where existing flood risk management actions will be reduced, accepting that flood risk will increase over time<sup>26</sup>. This will have limited implications for the population as this area is undeveloped, however, it will have implications for infrastructure as the railway line between Southend and London sits in this area. Alternative flood defence measures will be required to protect this infrastructure from flooding in the future.

Given the risk to the population, various measures are required to deal with the concerns to human health and wellbeing. These include:

- The need for an emergency plan to be in place;
- The need for sea defences to be maintained and improved;
- The need to maintain the population at current levels or lower;
- The need for existing homes to be made more flood resilient, and include areas where people can remain safe in the event of a flood;
- The need for new development to incorporate design elements that make them safe in the event of a flood for occupiers;
- The need for building techniques to be used that enable easy restoration in the event of a flood.

Tidal flood risk also poses an issue for biodiversity. The need for improved sea defences to protect the human population will see coastal habitats increasingly squeezed between them and the rising tide. This has implications for species that live in these coastal habitats including Benfleet and Southend Marshes Ramsar/SPA/SSI. It will be necessary to consider a range of alternative options to prevent the loss of these habitats occurring. This may include alternative flood management solutions such as the creation of flood storage area, the realignments of sea defences landwards to provide additional habitat, or the creation of new coastal habitat nearby.

Tidal flood risk also carries a risk to water quality. There are numerous industrial activities that take place on Canvey, as well as a Waste Water Treatment Works (WwTWs). If Canvey was to flood these uses would have a negative impact on water quality. As sea levels rise there is an increasing risk that Benfleet WwTWs will fall within the flood risk zone. There is also a risk that the former landfill sites adjacent to Benfleet Creek and on Two Tree Island will become at greater risk of flooding also, with the potential to leach pollutants into the estuary.

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<sup>25</sup> Thames Estuary 2100 Plan <http://www.environment-agency.gov.uk/research/library/consultations/106100.aspx#docs>

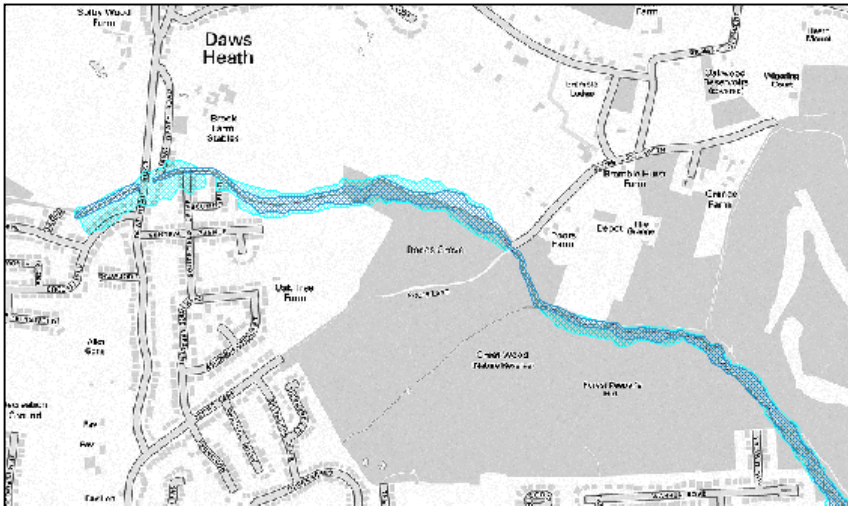
<sup>26</sup> See footnote 25.



### Fluvial Flood Risk

As set out previously there is a small area of fluvial flood risk to the north east of the borough associated with the Prittle Brook. The Prittle Brook rises in the Hadleigh area.

**Figure 14: Fluvial Flood Risk associated with Prittle Brook**



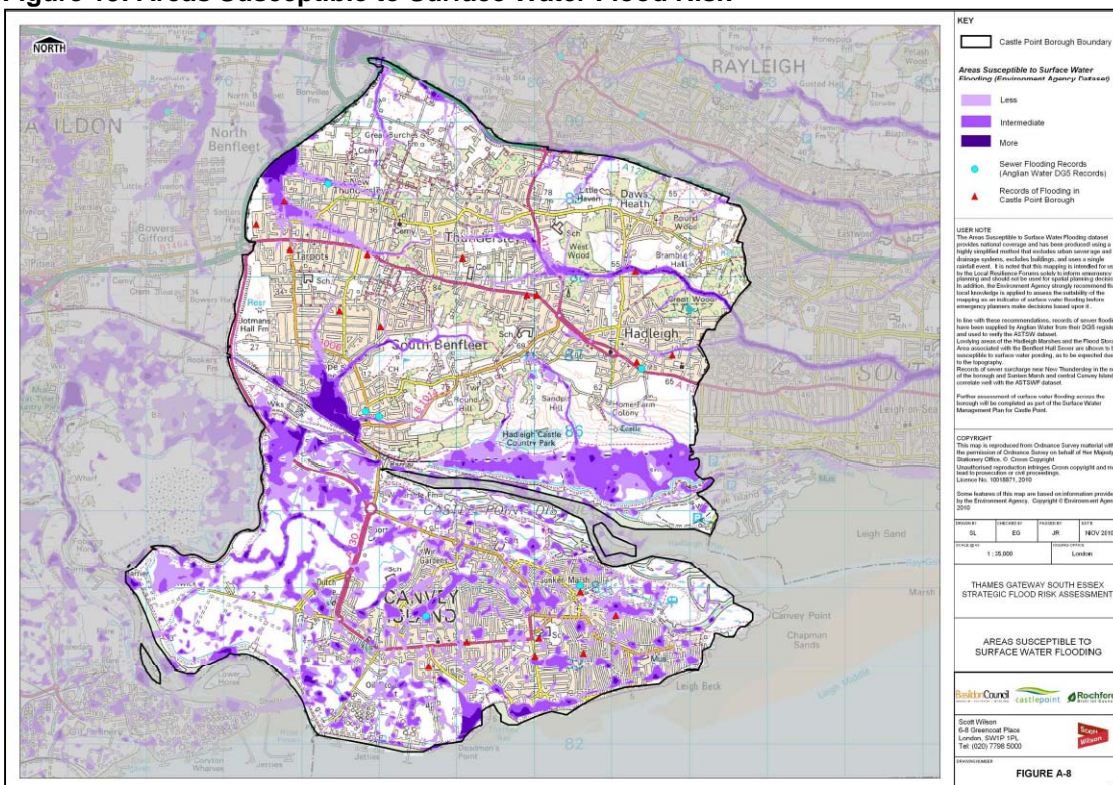
Turquoise – Flood Risk Zone 2 Blue – Flood Risk Zone 3

It is clear that there are only a few properties affected by this area of flood risk, although the potential impact of flooding on those households should not be underestimated. Additional development in the areas around the Prittle Brook may impact on the risk of flooding in this area, potentially increasing the depth and/or area at risk of flooding.

### Surface Water Flooding

According to national research undertaken by Defra, there are more than 12,800 properties estimated to be at risk of surface water flooding within the South Essex area in England. This includes 1,700 properties on Canvey Island and 1,000 in Benfleet (including Hadleigh and Thundersley). The map below identifies the areas susceptible to surface water flooding in Castle Point<sup>27</sup>.

**Figure 15: Areas Susceptible to Surface Water Flood Risk**



<sup>27</sup> SFRA Review 2010. <http://castlepoint.limehouse.co.uk/portal/planning/cs/sfra?pointId=1290780163670>

This indicates that whilst there are numerous locations at risk of surface water flooding on Canvey Island, there are some areas in Benfleet where there is a risk of deep flooding from surface water on the mainland. These are primarily associated with Benfleet Hall Sewer, the Prittle Brook and North Benfleet Brook towards the western boundary of the borough. In order to minimise surface water flooding in these low lying areas pumps are used to remove water from the drainage system.

## Groundwater Flooding

Groundwater flooding is not identified as a significant issue for Castle Point in the Strategic Flood Risk Assessment.

**Implications for the Plan:** *Flood Risk is clearly an issue for Castle Point. Whilst tidal flood risk is the main source of flood risk, other sources are also an issue. The plan should not seek to increase the population at risk of flooding and should take action that prevents a further increase in the area at risk of fluvial and surface water flooding. Additionally, where people are at risk of flooding defences should be maintained and improved and both existing development and new development should be made safer by incorporating resistance and resilience measures into development that help to ensure the safety of occupiers during a flood event and make restoration easy.*

## Water Quality

The Environment Agency website contains details of water quality monitoring around Castle Point, however there are no monitoring points (with data) within the Borough boundary. This is mostly likely due to the size and significance of the rivers and streams in Castle Point.

Information collected on the quality of bathing water along the coast in Southend indicates that bathing water quality was generally high in 2010, with the exception of Leigh where the bathing water quality met the minimum requirements of the Bathing Water Directive<sup>28</sup>.

Meanwhile, information collected on the Thames Estuary in order to inform the Water Framework Directives Monitoring requirements indicates that the Thames Estuary's current ecological condition is moderate only. This is potentially because it fails to meet the legal requirements for chemical levels<sup>29</sup>.

Having regard to the above data, it is important that future development in Castle Point does not result in a further reduction in water quality within the Thames Estuary, particularly given the location of sites such as the Benfleet and Southend Marshes in this area.

A primary impact on water quality from development will be the amount of additional discharge that will emerge from WwTWs. None of the WwTWs in Castle Point discharge directly into a European site of nature conservation. However, Canvey WwTWs discharges directly into the River Thames approximately 2 km upstream of Benfleet and Southend Marshes. In addition the discharge point is directly opposite the Kent part of the Thames Estuary and Marshes SPA/Ramsar Site. Meanwhile, Benfleet WwTWs discharges into the Benfleet Creek at a point approximately 3.5km upstream of Benfleet and Southend Marshes. It is therefore important that discharges from these works remain within Environmental limits identified by the Environment Agency. The Phase 1 Watercycle Study indicates that both works in Castle Point can achieve this<sup>30</sup>.

However, development in Hadleigh is served by the Southend WwTWs. There is no further capacity at this works because they are unable to expand the works further to improve the quality capacity of the output. Development in Hadleigh will need to provide additional surface water management in order to reduce the amount of rainwater entering the drainage system if its waste is to be accommodated at Southend WwTWs<sup>31</sup>.

<sup>28</sup> Environment Agency Bathing Water Data <http://maps.environment-agency.gov.uk/wiyby/wiybyController?value=ss7+1tf&lang=e&ep=map&topic=coastalwaters&layerGroups=default&scale=8&textonly=off#x=582650&y=188414&lg=1.&scale=6>

<sup>29</sup> Environment Agency Water Framework Directive Data (Estuaries) [http://maps.environment-agency.gov.uk/wiyby/wiybyController?topic=wfd\\_estuaries&layerGroups=default&lang=e&ep=map&scale=5&x=593411.5104166665&y=203045.31250000003#x=586036&y=185054&lg=1,5,6,7.&scale=6](http://maps.environment-agency.gov.uk/wiyby/wiybyController?topic=wfd_estuaries&layerGroups=default&lang=e&ep=map&scale=5&x=593411.5104166665&y=203045.31250000003#x=586036&y=185054&lg=1,5,6,7.&scale=6)

<sup>30</sup> South Essex Water Cycle Study Draft

<sup>31</sup> See footnote 30.

In addition to waste water discharge, some industrial uses may impact on water quality. It is important that the plan does not permit polluting industrial uses to locate where they may cause further deterioration in the water quality of the Thames Estuary.

**Implications for the Plan:** *In identifying the distribution of development consideration should be given to the capacity of Waste Water Treatment Works to service the development without resulting in further degradation of water quality in the Thames Estuary. Additionally, consideration should be given to the potential for water pollution when identifying locations for industrial development.*

## Water Resources

The climate in the East of England is typified by low rainfall with little variation in the average amount throughout the year, averaging about 600mm. The annual evapotranspiration averages 380mm. Most of the evapotranspiration occurs during the summer months and exceeds rainfall totals over this period. However, winter rainfall and recharge provides the water required to offset this seasonal imbalance.

Whilst the East of England is the driest region in the country it is also very fast growing. As a result water resources are expected to become increasingly limited, particularly as the East of England also has a significant proportion of the Countries arable land. It is expected that climate change will further limit these resources and require new approaches to conserve water to be put in place. The Environment Agency has produced a Water Resources Strategy for the East of England looking forward 25 years. A key prediction is that drought conditions are to be more frequent (due to longer, warmer and drier summers).

South Essex is a net importer of potable water. Water for the Essex Resource Zone is sourced from the rivers Chelmer, Blackwater, Stour and Roman River, with storage taking place at Hanningfield and Abberton Reservoirs. In dry years water is also transferred to Essex from the Great Ouse Groundwater Scheme and the Stour Augmentation Groundwater System. There is also an effluent recycling scheme at Langford, near Maldon that can feed up to 30 Ml/d into the Essex Resource Zone if needed<sup>32</sup>.

Water demand calculations indicate that growth in Castle Point could result in over 1 Ml/d of additional water being need to meet demand by 2031. This could be reduced by at least 25% if Code Level 3 water requirements are sought from new developments. Another important requirement is the need for new development to ensure that water supply infrastructure remains accessible so that it is easy to fix leaks and minimise wastage of potable water<sup>33</sup>.

**Implications for the plan:** *The location of development within Castle Point will not influence how water resources are affected by development. However, it is important that new developments are designed to minimise water demand to at least code level 3, and to ensure that there is sufficient space to access water supply infrastructure.*

## Air Quality

Until July 2010, air quality in Castle Point was measured at one site in Canvey town centre. Data shows that Sulphur Dioxide and Nitrogen Dioxide are consistently at low levels of concentration when compared to the national standards. The figure very rarely reaches higher than 25 parts per billion for NO<sub>2</sub> or 18ppb for SO<sub>4</sub>. The analyser is currently being moved to a new site in Hadleigh Town Centre.

In addition to the analyser, diffusion tubes are used to monitor Nitrogen Dioxide Levels at 30 locations across Castle Point. In June 2010, Defra prepared a progress report identifying six locations where more detailed assessment of Nitrogen Dioxide levels was necessary in order to determine whether Air Quality Management Areas need to be declared in Castle Point. The locations where Air Quality was considered to be an issue for further monitoring were:

- Somnes Avenue, Canvey Island
- Link Road/Somnes Avenue, Canvey Island
- Clare Road, Benfleet
- London Road, Benfleet

<sup>32</sup> See footnote 30.

<sup>33</sup> See footnote 30.



- Bottom of Bread and Cheese Hill, Benfleet
- Kiln Road, Benfleet<sup>34</sup>

These air quality monitoring locations coincide with major transport corridors in the borough, indicating that vehicle fumes are the primary cause of air quality deterioration in Castle Point. To this end, it is important that the location of new development promotes as far as is possible the use of sustainable forms of transport such as walking, cycling and public transport. If an Air Quality Management Area is identified as a result of additional monitoring, new development should not be located within the area unless sufficient mitigation can be put in place to limit harm to future residents.

The Environment Agency has a responsibility for Environmental Licensing. As such it collects data on air quality around industrial installations. The only installations liable for air quality monitoring in Castle Point are the Calor Gas and Oikos Terminals at South Canvey. Both installations emit very little in the way of air pollutants and are not considered to be a cause of poor air quality in Castle Point.

**Implications for the Plan:** *Development locations should be located in order to promote as far as is possible the use of sustainable forms of transport. New development locations should not be located in Air Quality Management Areas.*

## Climate Change

There are numerous sources of information with regard to climate change. The Met Office provides information on changes to weather patterns:

- The rise in global surface temperature has averaged more than 0.15 °C per decade since the mid-1970s. Central England temperatures have increased by 1°C since the 1970s.
- The 10 warmest years on record have occurred since 1997.
- Sea levels around the UK have risen 10 cm since 1900.
- If emissions continue to grow at present rates global temperature could rise as much as 7 °C above pre-industrial temperature by 2100<sup>35</sup>.

The UK Climate Impacts Programme prepared projections of changes in weather patterns for the year 2080 in 2009. A set of UK Maps have been prepared that show the worst case scenario, the best case scenario and a central estimate for each of summer mean temperature, summer rainfall and winter rainfall. With regard to the East of England, the UK Climate Impacts Programme provides central estimates that summer mean temperatures in the region will rise by between 3 and 4°C and summer rainfall will decrease by 30%. Winter rainfall meanwhile will increase by up to 20%.

There are a number of organisations who have predicted what the effects of climate change may have on the future. In respect of flooding the Environment Agency estimate that winters will get up to 40% wetter by 2080, and that the annual economic damage of flooding in the UK will increase from £1billion to over £15billion<sup>36</sup>.

It is expected that the number of homes that will be at high risk (10% chance per year) of surface water and sewer flooding will be in the region of 300,000 homes by 2080. This will not only have the economic consequences set out above but also social consequences such as the immediate health implications associated with flooding. Additionally, repeated flooding has been seen to cause mental health problems amongst victims. It is likely that the socially disadvantage will be most severely hit as a result of being uninsured and unable to pay for repairs<sup>37</sup>.

Increased frequency of flooding will not be the only consequence of climate change, areas such as the East of England will see a reduction in water resources, whilst places in Africa will see levels of water stress that will

<sup>34</sup> Local Air Quality Management 2010 Air Quality Progress Report  
[http://www.essexair.org.uk/Reports/CastlePoint\\_DEFRA\\_Appraisal\\_2010.pdf](http://www.essexair.org.uk/Reports/CastlePoint_DEFRA_Appraisal_2010.pdf)

<sup>35</sup> Met Office *Warming – Climate Change: The Facts*  
[http://www.metoffice.gov.uk/climatechange/guide/downloads/quick\\_guide.pdf](http://www.metoffice.gov.uk/climatechange/guide/downloads/quick_guide.pdf)

<sup>36</sup> Environment Agency (2009), *Adapting for tomorrow* <http://publications.environment-agency.gov.uk/pdf/GEHO0709BQBW-e-e.pdf>

<sup>37</sup> Foresight Future Flooding, Government Office of Science & Technology (2004)  
<http://www.foresight.gov.uk/OurWork/CompletedProjects/Flood/index.asp>

affect up to 250 million people. When combined with population growth places in Asia will also experience severe water stress by 2050 affecting over 1 billion people<sup>38</sup>.

Climate change will also affect biodiversity. The IPCC predict that global temperature rises in the region of 1.5°C to 2.5°C could see over 20% of species go extinct. Changes in temperature will affect the extent of a species range, and also the extent of habitat driving some species to extinction. Other species may see their range increased, potentially creating new risks for native species and for humans. As an example the range of malaria carrying mosquitoes has increased to include a greater area of Europe than previously<sup>39</sup>.

The IPCC consider that Northern Europe will see a mix of effects as a result of climate change, including some benefits such as a reduction in the need for fuel for heating, increased crop yields and increased forest growth. However, the negative impacts associated with flooding, water stress, and biodiversity and habitat loss will most likely outweigh benefits in the future<sup>40</sup>.

**Implications for the plan:** *Climate change is likely to have a significant impact on the environment in which we live in the future. There are direct links between climate change and biodiversity, flood risk and water resources. There will also be both direct and indirect links to issues such as air quality, health, population and the economy. It is important that new development is located and designed to withstand climate change – i.e. reduce the risk of flooding, improve water efficiency, incorporate biodiversity into development and improve energy efficiency and cooling.*

## Landscape Character

A landscape character assessment was undertaken of Essex in 2003<sup>41</sup>. This identified the characteristics of the area and susceptibility to change. Castle Point Borough falls in two character areas, the Thames Estuary and South Essex Coastal Towns.

The natural characteristics of the landscape of the Thames Estuary and South Essex Coastal Towns are identified as:

- very wide estuary mouth extending to the open sea
- flat low lying land south east of Basildon and around Canvey Island,
- steep sloping escarpments and ridges from Leigh on Sea to Benfleet and extending to Hockley,
- extensive tidal mudflats/sands and fringing saltmarsh
- large scale landscape with strong sense of exposure
- expansive views in which water and sky dominate, with outline of the Kent coast sometimes visible in the distance
- dynamic landscape due to tide and weather's influence
- rough low grazing marsh, rich wildlife
- extensive coastal grazing marsh between Canvey and Basildon

The artificial landscape features are:

- Canvey island is built on low lying land and has a street grid pattern with a network of drainage dykes within the built form
- rough low grazing marsh, rich wildlife
- pylons and overhead lines are visually prominent between Basildon and Benfleet
- river traffic tankers and container ships and smaller boats
- seawalls and dykes
- low quality intrusive commercial 'shed' development is common within the area
- the large oil refineries, and oil and gas storage tanks on south of Canvey Island, as well as landfill sites nearby or within the Borough

Past, present and future trends for change are identified as:

- natural coastal process - coastal squeeze

<sup>38</sup> IPCC Summary for Policy Makers <http://www.ipcc.ch/pdf/assessment-report/ar4/wg2/ar4-wg2-spm.pdf>

<sup>39</sup> See footnote 38.

<sup>40</sup> See footnote 38.

<sup>41</sup> Essex Landscapes <http://www.the-edi.co.uk/landscapecharacter.php>

- areas of traditional landscapes remain on the estuary.

Overall the landscape is identified as having a high level of sensitivity to change. The landscape condition is mixed, with poor quality commercial 'shed' development being common within the area. There is an opportunity for these areas to be significantly enhanced upon through appropriate schemes (which could in part include built development).

The identified pressure and likely future trends for change are:

- urban development pressure likely to be a significant ongoing trend
- areas where traditional landscape character survives will need particular attention
- recreational pressures are also likely to be considerable

In addition to the Landscape Character Assessment, it is possible to provide some further commentary about the urban landscape in Castle Point. The urban landscape is notably dominated by the car, with vehicle access and parking a prominent part of most streetscenes in Castle Point. Less consideration has been given to the pedestrian environment, and as a result the public realm in town centres, employment locations and more generally is poor.

**Implications for the plan:** *The Thames Estuary part of the landscape, although very susceptible to harm, can be protected by the Plan from inappropriate development. Given that much of the urban landscape is considered low quality in the assessment, the LDF has a role to try and avoid future damage, as well as there being the opportunity to bring about improvements to some aspects of the urban environment, in addition to the identified landscape improvement areas on the urban fringe.*

*Although many of the artificial structures dominate the nearby landscape such as pylons or refineries, they are either outside the scope of the plan e.g. pylons or of potential national significance e.g. refineries, oil and gas storage.*

## Heritage

There are numerous heritage assets in Castle Point. At the larger scale, the local plan identifies two areas of ancient landscape which are important to the heritage, visual amenity and biological diversity of the Borough; West Canvey Marshes and Daws Heath Wood. Other notable landscape areas of historic value include the ancient woodlands and Hadleigh Grazing Marshes.

With regard to the built environment, there are seven Scheduled Ancient Monuments in the Borough:

- Roman Saltern, 260m south east of great Russell Head Farm, Canvey Island
- Heavy anti-aircraft gunsite, 170m south west of the junction of cedar road and west crescent
- Heavy anti-aircraft gunsite, 380m east of Northwick farm
- Hadleigh castle: an enclosure castle and an associated dam and mill
- Heavy anti-aircraft gunsite on sandpit hill
- Roman Fort (near Hadleigh)
- Romano-British site north of pound wood, Thundersley

There are also 38 listed buildings and churches in the Borough including 3 grade I listed and 2 grade II\* listed. Additionally, there are two designated Conservation Areas within the Borough. These are:

- Florence gardens in Hadleigh, which aims to protect a series of bungalows which were once part of a Salvation Army Home Farm Colony, a conservation appraisal and management plan has been prepared for the area, which must be taken into account in the LDF.
- The conservation area in South Benfleet around the medieval settlement remains and the Grade I listed church, a conservation appraisal and management plan are being prepared for the area, which must be taken into account in the LDF.

English Heritage's PastScape Database lists 138 archaeological records for Castle Point<sup>42</sup>. These records highlight the importance of south Essex to settlers throughout time with finds dating back to the Palaeolithic era which started some 10,000 years ago. Numerous finds dating back to the Palaeolithic era, the Mesolithic era, the Neolithic era, the Bronze Age and the Iron Age indicate that people were living in the Castle Point areas throughout the early ages of man.

There are also numerous finds related to the various forces that occupied the country including the Anglo-Saxons, Romans and Vikings. More recent archaeology relates to the medieval times, particularly in Benfleet and Dutch settlement on Canvey Island.

Finally, there are a considerable number of sunken barges listed in the record dating to the 1800's highlighting the potentially important role played by south Essex in shipping during this period. South Essex also played an important role during World War Two. Siting at the mouth of the Estuary artillery was used to shoot down enemy planes heading up the Thames to London. There are numerous artillery remains across the area, and also a number of sunken wartime ships and aeroplane wrecks<sup>43</sup>.

In addition to these physical features of the historic environment, the history of Castle Point is also reflected in street names and the names associated with places. This is particularly strong on Canvey Island where there are many roads with Dutch names, reflecting its Dutch heritage, whilst the use of the word *Wick* in street names reflects the past practice of farming sheep for milk in the area.

**Implications for the plan:** *Any development in the area will need to take into account the quality of the historic environment, to ensure neither the fabric or setting of historically or architecturally important buildings, or monuments is harmed. Additionally, the historic nature of the landscape and urban environment needs to be protected from harm, and enhanced where possible.*

## Open Space

For most people, particularly the 80 percent of people in England who live in urban areas, having nature nearby in their local greenspace is very important. It provides a daily experience of wildlife. Contact with nature boosts people's physical and mental health. Exercise in the outdoors reduces obesity and is shown to reduce heart disease, blood pressure and diabetes – among England's most common medical problems.

Natural England's Accessible Natural Greenspace Standard (ANGSt) provides a set of benchmarks for ensuring access to places near to where people live. These standards recommend that people living in towns and cities should have:

- an accessible natural greenspace of at least 2 hectares in size, no more than 300 metres (5 minutes walk) from home;
- at least one accessible 20 hectare site within two kilometres of home;
- one accessible 100 hectare site within five kilometres of home;
- one accessible 500 hectare site within ten kilometres of home.

The table below is an extract from an assessment of the accessibility of natural green space in south Essex carried out by Essex Wildlife Trust. It indicates that households in Castle Point have good access to natural green space, particularly medium sized sites<sup>44</sup>.

<sup>42</sup> Heritage Gateway (search Castle Point)

[http://www.heritagegateway.org.uk/Gateway/Advanced\\_Search.aspx?reset=true](http://www.heritagegateway.org.uk/Gateway/Advanced_Search.aspx?reset=true)

<sup>43</sup> AGES Amateur Archaeology Association World War Two Project <http://www.ages-aaa.co.uk/lhi.htm>

<sup>44</sup> Analysis of Accessible Natural Greenspace Provision for Essex, including Southend-on-Sea and Thurrock Unitary Authorities Essex Wildlife Trust  
[http://www.essexbiodiversity.org.uk/Data/Sites/1/GalleryImages/pdf/EWT\\_ANGSt\\_document.pdf](http://www.essexbiodiversity.org.uk/Data/Sites/1/GalleryImages/pdf/EWT_ANGSt_document.pdf)

**Figure 16: Access to Natural Green Space in South Essex**

Local Planning Authority	Number of households*	% of households					
		within 300m of 2ha+ site	within 2km of 20ha+ site	within 5km of 100ha+ site	within 10km of 500ha+ site	meeting all ANGSt requirements	meeting none of the ANGSt requirements
Besliden	72,135	47	82	79	0	0	2
Castle Point	35,450	28	84	100	0	0	0
Southend-on-Sea	75,932	11	50	74	0	0	12
Thurrock	59,525	28	95	99	0	0	<1
<b>Combined Essex Total:</b>	<b>698,095</b>	<b>29</b>	<b>68</b>	<b>72</b>	<b>19</b>	<b>7</b>	<b>14</b>

\* Estimate from 2005 AddressPoint data.

Open Space provision comprises of natural green spaces such as country parks, woodlands and meadows, and also formal open space provision such as parks, playgrounds and sports pitches. Both forms of provision are equally important because the formal provision provides opportunities for recreation without putting biodiversity at risk of harm.

An Open Space Appraisal, prepared in accordance with PPG17 requirements was carried out in 2006. This found that the Borough of Castle Point is well provided for in terms of the quantity and range of public open spaces available. 18.6% of the total area of the Borough (4,508 ha) is accessible public open space. This equates to 96.6m<sup>2</sup> of public open space per person (86,608 people). There is a rich variety of open spaces within the Borough providing a good range of opportunities for formal and informal recreation<sup>45</sup>.

Whilst the quantity of Open Space was found to be good, there were issues with the mix, which fails to include formal open spaces such as parks and gardens, or civic squares. There were also issues with the quality of open spaces in Castle Point. Only 36% of the open spaces assessed were considered to be of a good or very good quality. These were primarily nature and semi-natural open spaces such as woodlands and country parks. 25% of the open spaces were considered to be of a poor or very poor quality. Poor quality setting, poor quality access and poor quality and poor maintenance of furniture and play equipment were cited as common problems across the open spaces in Castle Point.

The Open Space Appraisal made the following suggestions in respect of improving the open space offer in Castle Point:

- **Retain existing open spaces** – no open spaces have been lost since 2006.
- **Improve the overall quality of open space provision in Castle Point** – since 2006, a programme to improve the quality of open space provision in Castle Point has been implemented. All children's playgrounds have or are in the process of being replaced, new furniture has been installed and new maintenance routines have been put in place.
- **Provide an additional 10 ha of Urban Parks and Gardens** – since 2006 the Canvey 2000 Millennium Garden and Bumblebee Park have been completed. When the Open Space Appraisal is reviewed these will be included. Additional Urban Park and Garden provision is still required in the mainland however.
- **Improve Country Park provision at West Canvey** – Since 2006 the RSPB have created a nature reserve with public access and a new children's play area at West Canvey reducing this deficit.
- **Increase the number of Green Corridors connecting places** – no progress has been made in respect of this.
- **Provide space for outdoor bowls on Canvey Island** – no progress has been made in respect of this.
- **Provide an addition 8 badminton courts in the Borough** – There has been increased use of school facilities for private use since 2006.
- **Increase the amount of swimming pools by 4 lanes** – Since 2006 there is likely to have been a decrease in the opportunity for swimming as the pool at Furtherwick Park School is due to close.

<sup>45</sup> Castle Point Open Space Appraisal 2006

<http://www.castlepoint.gov.uk/Documents/departments/Planning/devFramework/PPG17%20Final%20Report.pdf>



It is unlikely that the additional lanes will be delivered due to the costs of providing, running and maintaining such facilities.

- **Provide an indoor bowls centre** – no progress has been made in respect of this.
- **Increase the amount of amenity green space in South Canvey and in North Canvey** – no progress has been made in respect of this.
- **Reduce the deficit of children’s play spaces in Central and South Canvey, in Daws Heath and in Central Benfleet** – no progress has been made in respect of this.
- **Reduce the under provision of allotments on Canvey Island** – no progress has been made in respect of this.

Whilst substantial progress has been made to improving open space provision in Castle Point since 2006 there are still further improvements to be made. It is likely that where deficits in provision are identified, efforts will be made to make space for additional open space, and attract funding for open space provision through the LDF.

The Council is currently preparing a Playing Pitch Assessment. Whilst this assessment is not yet complete, initial findings have revealed that there is a significant issue with pitches in the low-lying areas of the borough. These low-lying areas of open land are vulnerable to poor weather conditions such as snow and snow melt and flooding. A significant number of pitches on Canvey and at South Benfleet were flooded during the football season of 2010/11 and were unplayable for several months. There may therefore also be a need to locate some additional pitches in less flood prone parts of the borough.

**Implications for the Plan:** *There are deficits in open space provision in Castle Point for particular types of open spaces in particular areas. There are also borough-wide requirements for indoor bowls provision and swimming provision that need to be considered. Allocations in locations where there is a deficit should include sufficient space for that deficit to be addressed. Additionally, funding should be sought from new development to address borough-wide deficits in terms of open space.*

## Population

Population considerations are fundamental to any environmental baseline assessment of Castle Point. It is this population that generates the need for new homes and jobs, and it is the make up of this population that determines the impact it is likely to have on the environment, and also the impact the environment is likely to have on it.

The population of Castle Point is distributed as follows between the four main towns in Castle Point:

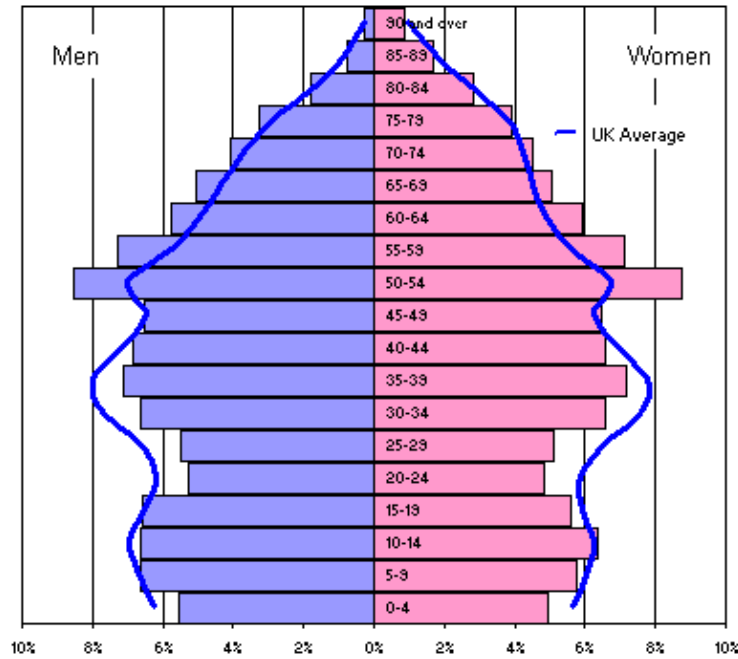
Benfleet	22%
Canvey	43%
Hadleigh	14%
Thundersley	21%

The ONS 2008 based sub-national population projections indicate that there are currently around 88,900 people living in Castle Point. Based on trends during the period 2003 to 2008, it is expected that the population in Castle Point will continue to increase to 100,100 by 2031. These projections are based on data collected for the 2001 Census. The 2011 Census will provide a measure for the accuracy of these projections<sup>46</sup>.

Castle Point has an ageing population. The following graph shows the population distribution of Castle Point by Age and Gender as at Census 2001. The graph shows that the number of people in Castle Point aged 50-74 is above the UK average. It also shows that the number of 0-4 year olds and 20-39 year olds are below the UK average.

<sup>46</sup> ONS 2008-based Sub-National Population Projections [http://www.statistics.gov.uk/downloads/theme\\_population/snpp-2008/InteractivePDF\\_2008-basedSNPP.pdf](http://www.statistics.gov.uk/downloads/theme_population/snpp-2008/InteractivePDF_2008-basedSNPP.pdf)

**Figure 17: Population Distribution**



Data from the 2001 Census has been used to prepare population projections that consider the number of people in each five year age bracket. Increased life expectancies and fewer births (Castle Point fertility rate is notably lower than the national average) mean that the population of Castle Point is expected to age over the next 20 years. The number of people over the age of 65 is expected to increase from around 19% in 2011 to around 27% in 2031. The number of people aged over 80 is expected to increase from around 5% to around 9% over the same period.

There is expected to be a corresponding decrease in the number of young people. The decrease of around 2% will see the population of people under the age of 20 reduce to just under 18% of the population<sup>47</sup>.

This population distribution creates challenges for plan making. As a result of this population skewed towards the older age groups, the proportion of people economically active in Castle Point is expected to decline by up to 17%. This will have implications for local businesses when seeking labour.

Older people, particularly the elderly and those with illnesses will require good access to healthcare services, social care services and community facilities and local shops in order to keep them healthy and active. There is a risk that these increased needs will detract resources from services for young people, which are needed to tackle anti-social behaviour issues and to help young people become economically active. Difficulties in the economy are currently preventing young people from accessing jobs with those aged 16 to 24 comprising 40% of those individuals claiming job-seekers allowance. Furthermore, the extended lifespan of older people also has an impact on the accessibility of housing for younger people, as the turnover of housing is less regular reducing the supply of homes in the borough, and as a result increasing costs<sup>48</sup>.

**Implications for the Plan:** Consideration needs to be given to the needs of both older people and young people when preparing the LDF. In particular, it is important that services needed by older people are provided in a way that does not compromise the delivery of services to young people.

<sup>47</sup> Equality Impact Assessment

<sup>48</sup> Equality Impact Assessment

## Homes

Population projections are used to determine the number of new homes that will be needed to meet future needs. The ONS 2008-based sub-national population projections have been used by the Department for Communities and Local Government to produce 2008-based Household Projections. These indicate a need for 10,000 homes in Castle Point<sup>49</sup>. However, the reliability of these projections is questionable given the abnormally high rate of house building in the period 2003 to 2008 on which the projections are based.

As a result, alternative household projections have been prepared based on 4,000 dwelling units per annum for Castle Point. This level of growth would accommodate both natural change in the population and permit for in-migration at a reasonable level. This in-migration is important for the local economy. Scenarios based purely on natural population change resulted in economic activity levels reducing by 17%. In-migration reduced this to a 7% reduction<sup>50</sup>.

A significant demand for new homes emerges as a result of decreasing household sizes. In the period 2011 to 2031, it is expected that the average household size will reduce from 2.3 people per household to 2.2 people<sup>51</sup>. This is a consequence of the ageing population that will see older couples and widows/widowers living alone without children. The size of a household is not necessarily proportionate to the size of homes as a result, with the Census 2001 data showing that 70% of households had less than 0.5 people per habitable room<sup>52</sup>. It is likely that under occupancy will continue to occur as older people are unwilling to sell up the family home or lose their gardens. Purpose built accommodation will not therefore have a significant impact in freeing up larger homes, particularly in the current economy where house prices have reduced compared to 2-3 years ago.

With older people continuing to place a demand on the housing stock, there are issues with the affordability of housing in Castle Point as supply and demand are mismatched. This is exacerbated by the level of local wages compared to the wages earned elsewhere. Currently, market prices are 7.9 times local household incomes making it very difficult for people to enter the housing market. As a result the need for affordable housing in Castle Point is high with 311 affordable homes per annum required to meet existing and projected need. This is in excess of the entire annual housing requirement for Castle Point (200 homes per annum) and cannot therefore be met<sup>53</sup>.

Castle Point has the highest level of home ownership in the country at 94.5%. This is complemented by a very small social housing stock with a long waiting list. Based on turnover rates, it would take on average over 10 years to attain a socially rented family sized home. There is also a very small private rented stock, with rental levels higher than elsewhere in south Essex. As a result accessibility to alternative forms of tenure is also restricted in the borough, making it very difficult for households with low incomes to find accommodation in the borough.

As a result of the difficulties for people on low incomes to find accommodation, a number of households have resorted to living in caravans at Thorney Bay Caravan Park. The caravan park has also attracted low income families from further afield including East London. This accommodation is far from ideal, failing to meet the decent homes standard in part due to the poor levels of thermal insulation. Given the implications of climate change people living in these homes are more at risk of the health effects of extreme heat, extreme cold and flooding. There are also social consequences associated with large areas of low cost accommodation occupied by low income families that need to be considered including child welfare, crime and employment.

**Implications for the Plan:** *There is a need to identify sufficient land for the provision of new homes in Castle Point with the aim of ensuring that everybody has a decent place to live that they can afford. This means that consideration needs to be given to diversifying the tenure provision to include more affordable homes, including affordable homes for rent. A mix of homes of different sizes should be provided; having regard to the*

<sup>49</sup> Household Projections for the East of England 2009 (Chelmer Model)

[http://castlepoint.limehouse.co.uk/portal/planning/cs/cs\\_add\\_ev?pointId=1286536607422](http://castlepoint.limehouse.co.uk/portal/planning/cs/cs_add_ev?pointId=1286536607422)

<sup>50</sup> See footnote 49.

<sup>51</sup> See footnote 49.

<sup>52</sup> Census Data Persons per Room – Households UV58

<http://neighbourhood.statistics.gov.uk/dissemination/LeadTableView.do?a=3&b=276959&c=SS7+1TF&d=13&e=7&g=444298&i=1001x1003x1004&m=0&r=0&s=1303905275740&enc=1&dsFamilyId=153>

<sup>53</sup> Strategic Housing Market Assessment Update 2010

[http://www.castlepoint.gov.uk/file/TGSE\\_SHMA\\_Update\\_Final\\_Report\\_190510\\_2.pdf](http://www.castlepoint.gov.uk/file/TGSE_SHMA_Update_Final_Report_190510_2.pdf)

*fact that older people will not necessarily want to move into small gardenless flats. Consideration should also be given to the issues associated with Thorney Bay and a solution identified that reduces the number of people living in poor quality accommodation.*

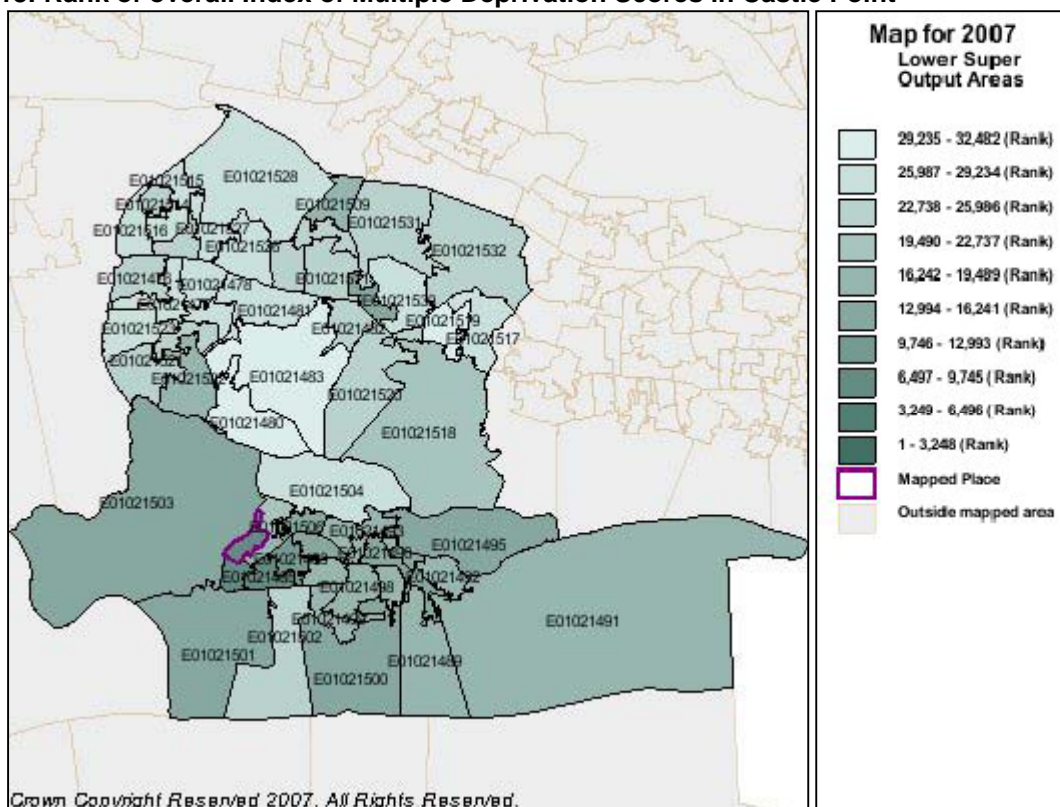
## Deprivation

The Indices of Multiple Deprivation (IMD) consider how deprived an area is in relation to all other areas with respect to the score of that area against 7 domains of deprivation. The seven domains are:

- Income Score
- Employment Score
- Health Deprivation and Disability Score
- Education, Skills and Training Score
- Barriers to Housing and Services Score
- Crime Score
- Living Environment Score

Nationally recognised areas known as Lower Super Output Areas (LSOAs) have been used to identify local assessment areas. These LSOAs are all of approximate equal size in terms of population, and enable areas smaller than wards to be examined in more detail for deprivation purposes. There are 57 LSOAs in Castle Point.

**Figure 18: Rank of overall Index of Multiple Deprivation Scores in Castle Point**



The map above shows that there are areas to the West of Canvey Island that are in the 30% most deprived LSOAs in the Country. Meanwhile, there are two areas in Benfleet and one area in Hadleigh that are in the 10% least deprived LSOAs in the Country<sup>54</sup>.

Consideration of the domains of deprivation indicates that there are issues with income deprivation, employment deprivation and health deprivation at West Canvey which are contributing towards its score. In addition to this, the whole of Canvey Island scores very poorly against the education, skills and training

<sup>54</sup> Indices of Multiple Deprivation - Castle Point  
[http://www.castlepoint.gov.uk/file/Indices\\_of\\_Multiple\\_Deprivation\\_2007.pdf](http://www.castlepoint.gov.uk/file/Indices_of_Multiple_Deprivation_2007.pdf)

domain. Twenty one of the areas on Canvey are within the 30% most deprived for education, skills and training. Of these, ten are within the 20% most deprived areas<sup>55</sup>.

Analysis of the scores for different domains of deprivation reveals that there is a strong correlation between both income and employment and also between these two indicators and health and to a lesser degree education. This therefore suggests that improvements to health services in particular and education facilities also will be important in reducing deprivation. Improving access to employment is also key to addressing this issue<sup>56</sup>.

Whilst not indicated in this data due to its age, it is expected that the growth in the population living at Thorney Bay will have seen the area of deprivation on Canvey spread to include parts of South Canvey also. It is however likely that the situation would be assessed as more severe at Thorney Bay due to the issues associated with barriers to housing and services, and the quality of living conditions affecting the site.

**Implications for the Plan:** *In order to address the disparity between deprivation levels at West Canvey compared to elsewhere in the borough, it is necessary to reduce deprivation at West Canvey by improving health and education services in this area, and also by improving access to a range of employment opportunities. There is also a need to tackle the issues associated with living conditions and barriers to housing at Thorney Bay.*

## Health

A Joint Strategic Needs Assessment for Essex has been prepared by partners across a range of organisations in order to inform plans across a range of sectors that bring about better health outcomes for local residents. The following text is extracted from the Castle Point Chapter of that Assessment<sup>57</sup>. Unlike the work on deprivation the Joint Strategic Needs Assessment uses Mid Level Super Output Areas (MSOAs).

### Life Expectancy & Mortality

Life expectancy is a measure of overall life chances and can indicate areas of poor health. Life expectancy is influenced by economic and social determinants and access to health care.

Castle Point has three wards that are below the England life expectancy (78.3yrs). These are Canvey Island South (77 yrs), Canvey Island Central Ward (77.5yrs) and St Mary's (78.1yrs). The overall difference in life expectancy between wards with the highest and lowest life expectancy is 5.7 yrs.

Mortality is a direct measure of health care need reflecting the overall disease burden on the population, both the incidence of disease and the ability to treat it. The mortality rate may be improved by reducing the population's risk (e.g. encouraging healthier lifestyles and reducing exposure to smoking), by earlier detection of disease and by more effective treatment.

Castle Point has the fifth lowest all cause mortality rate for all ages for males in Essex, but has the fifth highest all cause mortality rate for all ages for females – although this is just below the national average. There is wide variation at MSOA level for males and females.

For the under 75's the all cause mortality rate for males is the fifth lowest in Essex, and below the national figure. For females the all cause mortality rate is 8th in Essex, and below the national figure. Again there is wide variation at MSOA level.

**Cancer:** The cancer mortality trend line for males (all ages) in Castle Point is below the England trend line. The mortality rate from cancer for females (all ages) for Castle Point is above the national average. This pattern is similar for the under 75's, with wide variation at MSOA level.

**Lung cancer:** the mortality rate from lung cancer for males is the 6th highest in Essex, but below the national figure. However, females in Castle Point have the highest mortality rate from lung cancer in Essex, and which is above the national average.

<sup>55</sup> See footnote 54.

<sup>56</sup> See footnote 54.

<sup>57</sup> Castle Point Joint Strategic Needs Assessment 2008 <http://www.essexpartnership.org.uk/>

*Breast cancer:* Castle Point has the second highest mortality rate from breast cancer for females, and is higher than the national and regional figure.

*Prostate cancer:* Castle Point has the 5th lowest mortality rate from prostate cancer – below the national average.

*Circulatory diseases:* Mortality from circulatory diseases has continued to fall over the last 10 years and is below the England figure for males for all ages. However, for females of all ages the mortality rate from circulatory diseases was below the national and regional level in the mid 1990s, but has increased and now mirrors the England figure.

For the under 75yr olds, the mortality rate for females and males is below the national average. There is wide variation across MSOAs.

*Respiratory diseases mortality (bronchitis, emphysema & other COPD):* The mortality rate from bronchitis, emphysema and other COPD for males (all ages) is the 5th lowest in Essex (and below that for East of England & England & Wales). However, this figure for women of all ages is the third highest in Essex, and above the EoE and England figure.

*Suicide & undetermined Injury:* Compared with the rest of Essex, Castle Point has the lowest mortality rate from suicides and undetermined injury for males of all ages and the second lowest for women of all ages.

### **Hospital admissions**

The main reason for elective admissions between 2004 and 2007 for those living in the Castle Point & Rochford areas was unspecified cataract disorder (5.5% of all admissions). The most emergency admissions during this time were for unspecified chest pain.

Hospital admissions by local authority show that Castle Point's hospital admission rate for circulatory disease is not significantly different from the Essex average, whilst the hospital admission rate for respiratory disease is significantly lower than the Essex average. The hospital admission rate for cancer is significantly higher than the Essex average and is one of the highest in the county.

### **Long term conditions**

Castle Point has a higher percentage of the population diagnosed with hypertension compared with the England average (13% compared with 12%). The proportion of the Castle Point population diagnosed with CHD is slightly higher than the England average, whilst the proportion of people diagnosed with diabetes is similar to the England average. However, all these figures are taken from GP registers and could simply reflect that an area is better at identifying and recording that people have these conditions.

### **Limiting long term illness**

This reflects a self assessment of whether or not a person has a limiting long term illness, health problem or disability that limits their daily activities. The proportion of people with a LLTI in Essex is 16.2%. In Castle Point this varies by ward from 11% to 21%. MSOAs in Castle Point that have a high proportion of people with a Long Term Limiting Illness also have higher proportions of the population that are not employed and higher proportion of benefit claimants.

### **Screening**

Uptake of breast screening in Castle Point is above the Essex average, whereas uptake of cervical screening is below the county, regional and England average.

### **Low birth weight**

At just over 7%, Castle Point has the 4th highest proportion of low birth weight babies in Essex.



## Immunisations

The uptake of MMR in 2 yr olds in Castle Point & Rochford has been increasing over the last two year and is now higher than the uptake in Essex but below the regional and England rate. The incidence of measles in Castle Point for under 1 year olds for 2002-5 was greater than the national and regional average.

## Childhood obesity

Limited uptake of the childhood measurement programme prevented meaningful data from being obtained.

## Teenage pregnancy

It is particularly noticeable in Castle Point that wards where girls have lower educational achievement have a higher incidence of teenage pregnancy (particularly CI Winter Gardens, CI Central and CI West).

## Care & Support - Social care

Castle Point has the second highest rate of adult social care service users per 1,000 of population aged 65+. Compared with Essex overall, there are slightly higher rates of carers and persons providing unpaid care.

## Mental Health

Castle Point has the 6th lowest rate of claimants of incapacity benefit with mental health problems. From a mathematical model it is estimated that within Essex, Castle Point has one of the highest percentages of the working age population suffering from a neurotic disorder or depression.

## Immunisation

Uptake of influenza vaccine and pneumococcal vaccine in the over 65's in Castle Point is just above the England average.

## People Living with Disabilities

Castle Point has a lower rate of people with learning disabilities receiving social care services compared with the Essex average (2.6 persons with a learning disability per 1,000 of the population aged 18+ vs. 4.4/1,000).

*Sensory impairment:* Castle Point has a higher rate of people with a main sensory impairment (sight loss, sight impaired, deaf, hard of hearing) receiving social care services compared with Essex ( 5.0 persons with a sensory impairment per 1,000 population aged 18+ compared with 4.4/1000 18+ in Essex).

*Physical impairment:* Castle Point has a slightly lower rate of people with a physical disability receiving care from the physical impairment teams compared with Essex (2.1 persons with physical impairment per 1,000 population aged 18+ compared with 2.4 /1,000 18+ for Essex).

## Lifestyle factors

*Obesity:* Based on synthetic estimates, the percentage of obesity in Castle Point varies by ward from 18.6% in Boyce to 24% in Canvey Island North. Castle Point has 6 wards that have levels above the England average (all in Canvey).

*Smoking:* The prevalence of adult smoking is below that of Essex.

*Physical activity:* Castle Point has the fourth lowest level of physical activity in adults in Essex (approx 18% of the population doing at least 30 minutes of moderate physical activity at least 3 days a week).

*Sexual activity:* The rate of uncomplicated Chlamydia in Castle Point is nearly 50% below the UK rate.

*Drugs and alcohol:* The prevalence of binge drinking in adults in Castle Point is the third lowest in Essex (at 15% - from synthetic estimates). The prevalence of drug misuse in Castle Point is estimated to be slightly above the Essex County Council average, but below the England average. Castle Point has the second

lowest % of traders selling alcohol to under 18's in Essex, with almost 95% of traders requesting ID for age related sales.

*Road traffic accidents:* Castle Point has the lowest crude rate of RTAs (killed or seriously injured casualties per 1000 resident population) in Essex.

### Conclusions of the Joint Strategic Needs Assessment

The joint strategic needs assessment identifies that issues associated with the ageing population, and the education deprivation levels, as identified earlier in this report will impact on the need and provision of health services in Castle Point. It further recognises that there are inequalities between the northern and southern parts of the borough in respect of health including issues associated with mortality, disability and limiting lifelong illnesses, and also in respect of lifestyle factors.

Key health concerns arising from the Joint Strategic Needs Assessment in respect of Castle Point are the mortality rates associated with lung cancer, breast cancer and respiratory diseases. Whilst lifestyle choices may well be to blame for some of these issues, it is important that future planning of Castle Point seeks to reduce exposure to air pollution, and to provide opportunities for residents to engage in regular outdoor activities.

**Implications for the Plan:** *Improved provision of healthcare services is required on Canvey to reduce inequalities with Benfleet. Additionally, reducing exposure to poor air quality should be a consideration when seeking development locations, and access to open space and recreation facilities should be promoted.*

## Economy

An Employment study for the Borough was undertaken by Roger Tym and Partners in November 2006<sup>58</sup>. It identified that the economic base of the borough is weak. Castle Point has one of the smallest economies in the country ranked only 29<sup>th</sup> of 408 (Basildon 115; Southend 96) in terms of economic scale and contributing only 0.07% to national GVA. The Borough also has a very low score for productivity with both low weekly earnings and GVA per head ranked in the bottom 20 local areas of 408 nationally. Indeed between 1999 and 2005 during a period of sustained national growth, the Castle Point economy grew by only 8%. As a result, of the 40,000 people living in the Borough who are in employment, only 21,000 jobs are located in the Borough resulting in 19,000 people (net) commuting out of the Borough on a daily basis for work.

This poor economic performance is a consequence of the Borough's industrial structure both in terms of the nature of local businesses and the limited opportunities that there are to broaden the base of the local economy particularly the need for growth in the knowledge based economies marked by rising levels of innovation technology creativity and entrepreneurship. Many of the businesses in Castle Point are small with an average of only 6 employees per business (national average 10). They are largely low skilled and low capital enterprises with limited growth potential.

Broadening the base of the economy requires a fit for purpose supply of sites and premises that meets the changing needs of business. Within Castle Point businesses tend to be located in one of three locations:

- Charfleets (Canvey), Manor (Benfleet) or Stadium Way (Rayleigh) Industrial Estates;
- Within existing town or neighbourhood centres; or
- At Ad Hoc locations around the Borough

### Industrial Estates

The Charfleets Industrial Estate is located to the south west of Canvey and extends to an area of approximately 38 hectares. The estate itself is composed of light industrial units mainly of post war origin, many now dilapidated and of poor external appearance. Many of the buildings in the vicinity of Canvey Road have converted to quasi retail/ service uses e.g. Camping superstore; gym; beautician etc. At the rear of the

<sup>58</sup> Employment Study 2006

<http://www.castlepoint.gov.uk/Documents/departments/Planning/devFramework/Castle%20Point%20Employment%20Study%20Nov%202006.pdf>



estate there are a number of low quality general industrial uses such as a concrete batching plant, scrap metal yards etc. The existing users have gravitated to the estate largely because their business model dictates the need for no frills/ low cost accommodation. All of the businesses are SMEs, most micro-business (less than 5 employees) and there are few (if any) FTSE 250 companies. As a consequence, the workforce employed on the estate also tends to be low skilled and low paid.

The internal infrastructure of the estate has not changed since the estate was create and is increasingly becoming unfit for purpose. Particular issues relate to:

- The public realm being inhospitable with no estate management
- Inadequate parking resulting in cars being inappropriately left around the estate, narrowing roads and causing circulation problems particularly for large vehicles.
- An inadequate drainage system that frequently results in effluent being discharged both onto the public realm and into buildings.

The Manor Trading Estate is located to the North of South Benfleet and is dominated by a range of general industry and industries requiring specific planning consent due to their environmental impact including motor repairs, vehicle dismantling, a scrap yard and a waste transfer station. The uses are low capital and low skilled uses. Where there are B1 uses these tend to be light industrial rather than office. Occupancy levels are high. The majority of the building stock is in need of repair, particularly the large number of smaller units. Access to the site is restricted and the infrastructure of the estate is not fit for purpose. The roads and pavements are in private ownership and have not been maintained to the extent that they are breaking up with resultant large blocks of concrete.

The Manor Trading Estate is currently the least fit for purpose estate in Castle Point. However it is estimated that there about 1,250 workers on the estate (5% of all jobs in Castle Point). A Manor Trading Association has been established to promote the regeneration of the estate.

The Stadium Way industrial estate is more modern and has seen significant investment in recent years. Many of these developments have been retail and the estate is at capacity although there is the potential for extending the site to provide additional floorspace.

## **Town Centres**

Town centres in Castle Point form part of the retail town centre hierarchy in South Essex which has Basildon, Southend and Thurrock Lakeside as key regional centres. Due to the insular nature of Canvey Island, Canvey Town Centre is considered to be a third tier town centre. The three town centres of South Benfleet, Tarpots and Hadleigh share catchments and are less well developed as individual town centres. These are considered to be fourth tier town centres, known as district centres. The role of third and forth tier centres is to meet local needs and to support connections to higher tier centres.

A retail needs assessment was carried out in 2007<sup>59</sup>. As part of this work a health check of the town centres in Castle Point was carried out. This health check found that the district centres of South Benfleet and Tarpots were relatively healthy, being well occupied by an appropriate mix of retail offer. Canvey Town Centre and Hadleigh Town Centre were however considered to have issues. Hadleigh Town Centre was found to be dominated by the road network and a proliferation of second hand car sales showrooms. Canvey Town Centre meanwhile was not considered to have a good public realm, or a good mix of retailers. Canvey Town Centre has a smaller area of retail floorspace than other town centres in south Essex serving similar sized catchments e.g. Rayleigh.

Meanwhile out of centre retailers were found to be performing above average. For example Morrisons on Canvey was achieving an above average income per square metre of floorspace, whilst Sainsburys in Canvey Town Centre was performing below average.

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<sup>59</sup> Retail Needs Assessment 2007

<http://www.castlepoint.gov.uk/Documents/departments/environment/planning/FINAL%20Report.pdf>

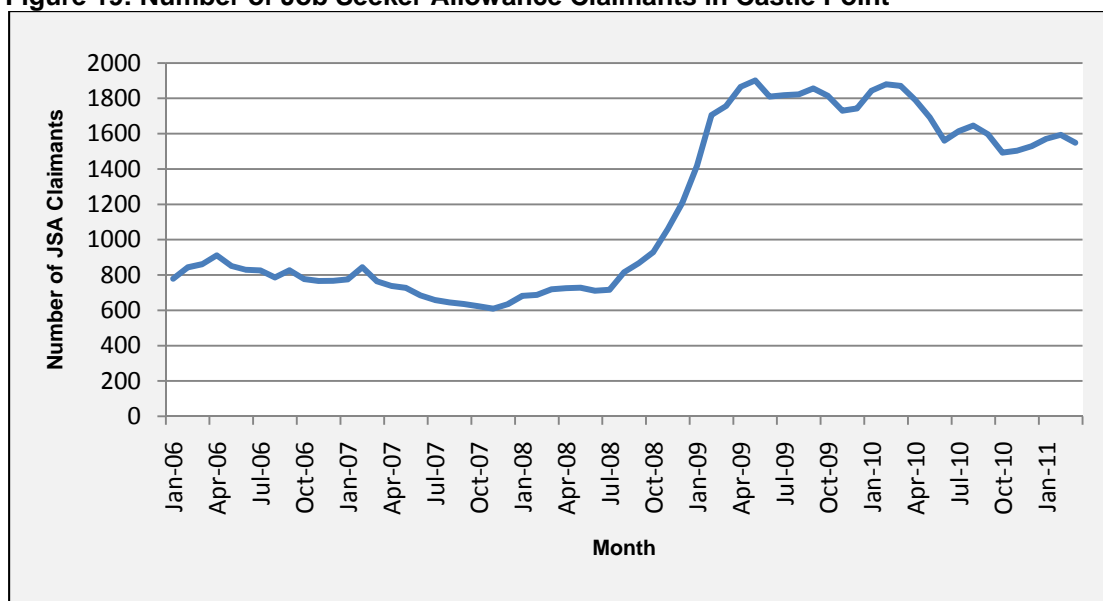
### Employment Growth Requirements

Castle Point has a growth target to achieve an additional an additional 2,000 jobs by 2021. In 2008 there were 25,000 jobs in Castle Point with a job density of 0.45 (East 0.77; GB 0.79). Given that there is a working age population of 57,000, of which 42,000 people are economically active, there is a significant net out-commuting from the Borough to access work<sup>60</sup>. This has implications for the transport network, and thus for air quality.

Average workplace earnings in Castle Point are £387 per week compared with £488 per week for the East of England and £500 per week for Great Britain. Local people working in Castle Point earn far less than those residents who commute. The average earnings of all economically active residents in Castle Point are £465 per week suggesting there are substantial benefits to commuting<sup>61</sup>.

As at March 2011, there were 1,549 Job Seeker Allowance claimants in Castle Point. This is high compared to 2007 but lower than the peak of over 1,900 in March 2009. Low incomes and unemployment have implications for deprivation levels in Castle Point, particularly for those locations at West Canvey where deprivation is already an issue<sup>62</sup>.

**Figure 19: Number of Job Seeker Allowance Claimants in Castle Point**



In achieving the 2,000 jobs target, the nature of the demand will therefore be twofold; firstly to create employment opportunities to meet the needs of both the existing and projected unemployed. Secondly to entice workers who currently commute outside the Borough to be able to access employment opportunities locally. To achieve the latter, there will be a need to generate higher value employment uses to ensure that the local opportunities meet the aspirations of existing commuters.

In order to deliver more jobs in Castle Point, additional floorspace is required. Current provision is running at less than 1,000m<sup>2</sup> per annum<sup>63</sup> and this is likely to be negatively impacted on by the current economic circumstances. In light of this, the level of commercial development in Castle Point will need to increase to around 3,000m<sup>2</sup> per annum to provide sufficient jobs.

### Commercial Growth Requirements

The Employment Study considered the industries in which there is expected to be jobs growth in Castle Point in the period 2001 to 2026. These growth sectors were:

- Construction – 400 jobs;

<sup>60</sup> NOMIS Labour Market Profile for Castle Point <https://www.nomisweb.co.uk/reports/lmp/la/2038431769/report.aspx>

<sup>61</sup> See footnote 60.

<sup>62</sup> See footnote 60.

<sup>63</sup> Castle Point Annual Monitoring Reports <http://www.castlepoint.gov.uk/main.cfm?MenuId=11458>

- Retail – 300 jobs;
- Hotel and Restaurants – 100 jobs;
- Transport, storage and communications – 200 jobs;
- Business activities – 500 jobs;
- Health and social work – 200 jobs;
- Others including sport and recreation – 300 jobs.

There were no areas of the economy that were considered to be likely to fall into substantial decline, in particular manufacturing was expected to remain stable. Manufacturing in Castle Point was considered to be largely isolated from the global market, and less likely to be affected by globalisation than manufacturing elsewhere (e.g. car manufacturing is highly globalised)<sup>64</sup>.

Since the Employment Study was undertaken in 2006 there has been the economic recession, and it is unclear as to whether the jobs in construction will be delivered, at least in the short term. However, the designation of Hadleigh as the location for the Mountain Biking event has the potential to stimulate additional jobs in sport and recreation, and also in related areas such as business and restaurants than may have been considered in 2006.

Retailers have also felt the impact of the recession, with Woolworths shutting in both Canvey and Hadleigh Town Centres, and a number of vacancies emerging particularly in Canvey. However, the economy is now stabilising and some growth was seen at the start of 2011. The Retail Needs Assessment identified a requirement for around 10,000 square metres of additional retail floorspace in the borough by 2026. This requirement comprises 3,350m<sup>2</sup> of floorspace for convenience retail and 6,570m<sup>2</sup> of floorspace for comparison retail<sup>65</sup>. This provision would support more local spend, reducing the need to travel for goods, and also contribute towards jobs in retail.

**Implications for the Plan:** *In order to improve the quality and productivity of the local economy in order to provide more high paying jobs, it is necessary to seek improvements to the quality of existing employment areas and town centres, and also to provide additional floorspace to accommodate growth sectors and provide additional retail floorspace to retain more spending locally.*

## Transport

Castle Point is less than 40 miles from the centre of London, with road links via the dual carriageway A127 and A130 roads. The Borough is relatively well served by rail with a well located railway station in Benfleet. Journeys to London take under 45 minutes, with the operator achieving the highest level of service reliability in the Country. As a result, commuting for work into London is popular with residents.

The railway also enables residents to commute to the nearby towns of Basildon and Southend for work. Census 2001 data revealed that over 14% of people commute to work by rail – far higher than the East of England and England averages for this form of transport<sup>66</sup>. However, due to the arrangement of railway lines in Essex, it is not possible without considerable effort to commute by rail to other parts of the County including the County town of Chelmsford.

Just east of the Borough boundary is the London Southend Regional Airport, with a licence to increase passenger numbers from 7,000 per annum to 300,000 per annum. Permission for the Airport to expand has been granted and a new station has been built. Passenger flights to Ireland have now started operating from the airport. Cargo flights also operate from the airport. It is expected that this will generate job opportunities; however this again is not linked to the railway network that serves Castle Point.

Work is also underway on the constructing a new port in Thurrock District to the west. This will see increased movement of cargo in south Essex primarily by rail but also by road. This transport hub will be a key generator of jobs and commuter movements in the sub-region. Railway access to this port for commuters will be possible upon its completion.

<sup>64</sup> See footnote 58.

<sup>65</sup> See footnote 59.

<sup>66</sup> Census 2001 Travel to Work (KS15)

<http://neighbourhood.statistics.gov.uk/dissemination/LeadTableView.do?a=3&b=276959&c=castle+point&d=13&e=46&g=444316&i=1001x1003x1004&m=0&r=1&s=1303988259656&enc=1&dsFamilyId=283>

A number of bus routes operate in Castle Point, and serve the borough well during the daytime. However, most services are limited or cease by 7pm. Southend and Basildon act as bus hubs, with routes either aimed at taking people into these centres, or else passing through the borough in order to connect them. As a result, employment areas outside the town centres in Basildon and Southend are difficult to reach, requiring 2 or more bus journeys for residents of Castle Point. Additionally, buses serving the employment areas in Basildon are part of a different network and require a second ticket to be purchased also.

Given the difficulties in reaching some employment locations by public transport, particularly that elsewhere in Essex, there is a high level of out-commuting for work by car. The Census 2001 identified that over 26,000 people in Castle Point travelled to work by car, either driving or as a passenger. The number of people who walked or cycled to work was far lower than the East of England and England averages<sup>67</sup>. This causes severe congestion along key transport corridors and at key junctions during peak hours.

Locations where congestion is a particular issue in Castle Point include:

- Sadlers Farm Roundabout;
- A13 from Sadlers Farm to Hadleigh;
- A129 between the A127 Rayleigh Weir Junction and the Woodmans Arms Junction;
- A130 from Sadlers Farm to the Waterside Farm Junction;
- Somnes Avenue from the Waterside Farm Junction to the Elsinor Road Junction;
- Canvey Road from Charfleets Industrial Estate to Haven Road.

Other routes such as Benfleet High Road, Essex Way, Link Road, Furtherwick Road and Long Road also experience high levels of traffic during peak hours, but tend to become congested as a result of delays on other roads.

The difficulties with congestions on routes in Castle Point is recognised by the County Council, who are the local Highway Authority. As a result a number of highways schemes are underway to relieve congestion. These include:

- A13 Passenger Transport Corridor Improvements between Sadlers Farm and Kenneth Road Thundersley;
- Redesigning Sadlers Farm Junction;
- Roscommon Way Phase 1 from Northwick Road to Haven Road.

Whilst some congestion reduction efforts are being made to improve traffic conditions in Castle Point, points of congestion still remain unresolved. Additionally, there is a clear need to promote greater levels of walking and cycling in Castle Point. Over 5,000 people travel less than 2km for work and yet less than 3,000 people walk or cycle to work. Public transport is also an issue. Local people are clearly happy to make sensible journeys by rail to work, and yet the network does not allow people to commute to nearby towns in the north of the county. Meanwhile, bus networks do not provide reasonable and cost effective access to employment opportunities on the edge of Basildon and Southend. Additionally, services levels are poor of an evening forcing people to use private means of transport.

***Implications for the plan:*** *When seeking a development location there is a clear need for the impacts on existing areas of congestion to be considered. Additionally, it is important that new development is located to maximise opportunities for walking and cycling to access jobs and services. Access to public transport services should also be a consideration. Increased access and increased use will improve the viability of services enabling them to run more frequently or over a greater period.*

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<sup>67</sup> See footnote 66.

## 4. Sustainability Issues

### Purpose of identifying sustainability issues

In this section all sustainability issues that may potentially affect the Canvey Town Centre Masterplan have been identified. This information has been gathered through:

- Reviewing other policies, plans or programmes identified as relevant to the plan (stage A1);
- Information collected on the current baseline and trends (stage A2);
- Workshop of Council Officers to identify issues affecting the borough;
- Consultation with stakeholders such as local strategic partners and the SEA consultation bodies; and
- Seeking the views of the public.

It is important to note here that the identification of sustainability issues is key to reaching an informed view on the sustainability of the plan. It is from those issues identified within the local area, that Sustainability appraisal objectives can be derived. It is these objectives that are to be used to check and refine the plan.

### Sustainability Issues

Sustainability issues can be any problems or uncertainties which need to be understood and addressed before the plan can be confidently considered sustainable. They include environmental problems, which must be identified under the SEA Directive. However, they could also be social or economic.

#### Officers

A group of Council Officers undertook an exercise to identify potential sustainability issues for Castle Point. They then sought to identify the 5 most important issues under each heading of Environmental, Social and Economic. The table below sets out the results of this exercise:

**Figure 20: Results of Officers Workshop to identify Sustainability Issues in Castle Point**

Environmental Issues
<ol style="list-style-type: none"> <li>1. Nature conservation – Six SSSIs, Ancient Woodland, Local Wildlife Sites, Ramsar Site</li> <li>2. Flood Risk – tidal and surface water</li> <li>3. Green Belt</li> <li>4. Quality of coastal landscape</li> <li>5. Air Quality, high CO<sub>2</sub> emissions from detached houses and high car usage – increased CO<sub>2</sub></li> </ol> <p>Others (no particular order)</p> <ul style="list-style-type: none"> <li>• Poor quality of public open space</li> <li>• Water importing area</li> <li>• Waste issues</li> <li>• Quality of public realm – poor management and maintenance</li> <li>• Historic Features</li> <li>• Plotlands</li> </ul>
Social Issues
<ol style="list-style-type: none"> <li>1. Ageing population – housing, health, access, mobility scooters, poverty</li> <li>2. Youth – facilities, jobs and leisure</li> <li>3. Hidden households – affordable housing</li> <li>4. Access to jobs and childcare, access to services and adequacy of public transport</li> <li>5. Deprivation – quality of housing, houses in multiple occupation, unemployment, educational attainment, health</li> </ol>



<p><b>6. Access to open spaces, play areas, green space</b></p> <p><b>Others (no particular order)</b></p> <ul style="list-style-type: none"> <li>• <b>Ethnicity, social groups and mainland v. Canvey</b></li> <li>• <b>Gender issues</b></li> <li>• <b>Travellers</b></li> <li>• <b>Car ownership</b></li> <li>• <b>Disability</b></li> <li>• <b>Politics</b></li> <li>• <b>Vulnerable people</b></li> </ul>
Economic Issues
<p><b>1. Quality of employment areas</b></p> <p><b>2. Flood risk</b></p> <p><b>3. Ageing population</b></p> <p><b>4. Affordable housing</b></p> <p><b>5. Town Centre viability</b></p> <p><b>Others (no particular order)</b></p> <ul style="list-style-type: none"> <li>• <b>Employment</b></li> <li>• <b>Out-commuting – lack of job opportunities</b></li> <li>• <b>Canvey Seafront</b></li> <li>• <b>Transport</b></li> </ul>

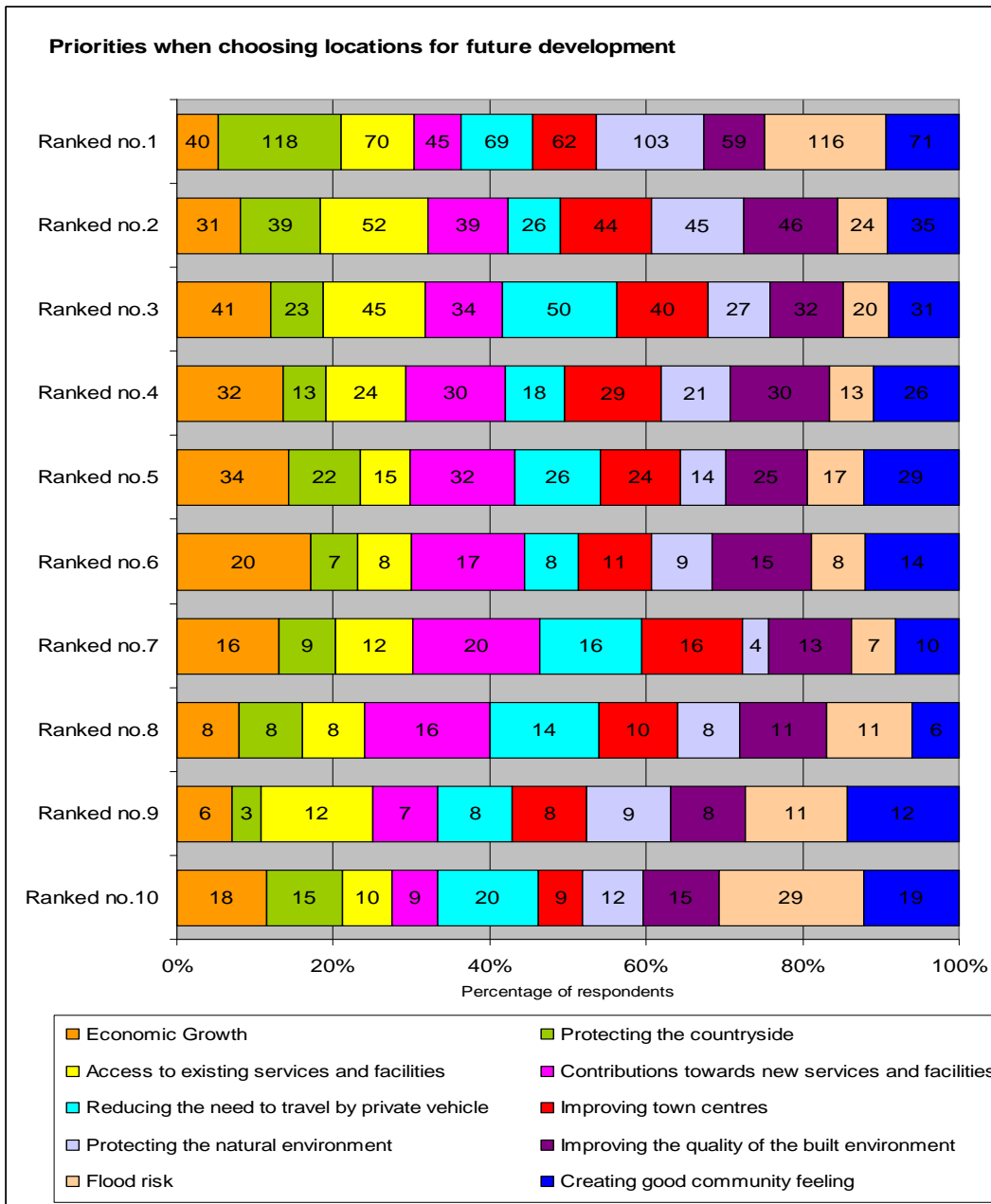
## Residents

Consultation has also been undertaken with the public on sustainability issues for the LDF generally. In 2008, the Citizens Panel were consulted on a range of planning matters. As part of this consultation they were asked to prioritise ten factors to be taken into account when locating development. The outcomes are presented in figure 21. Additionally, as part of this consultation residents were asked whether they would prefer to see a wider choice of shops and services in local town centres or whether they would like improved access to other centres nearby such as Basildon and Southend. 65% of residents indicated that they would like to see a wider range of shops in local town centres.

In 2009, a questionnaire was sent to all households in Castle Point seeking residents views in how regeneration and growth should be delivered in the borough. 93% of Canvey Island residents agreed that there was a need for regeneration in Canvey Island Town Centre. Furthermore, 90% of Canvey Island residents considered there was a need to minimise the impact of development on the environment and 86% considered it important to protect wildlife from harm. There was generally less support for meeting local housing needs and providing affordable housing (55% and 50% of Canvey Island residents supported this). However, it should be noted that many of the respondents were over 50 years old, and would not necessarily be considered representative of those age groups typically in need of housing. Residents views should be read alongside evidence in respect of housing which is a sensitive local issue.

The weight attached to different issues varies between different groups of stakeholders. Environmental issues identified by the officers working group are ranked highly in the priority of residents, with protecting the countryside, protecting the natural environment and flood risk all scoring highly. However, consultation responses are but a single source of evidence, the empirical studies used to inform the environmental baseline highlights other areas of importance also, which may not necessarily be a priority for local residents. The development of sustainability objectives should therefore be mindful of capturing those sustainability issues that whilst not prioritised by residents or officers may ultimately impact on the ability of the plan to contribute towards the creation of sustainable development.

**Figure 21: Residents Priorities of Sustainability Issues**



## Key Sustainability Issues for Castle Point

Having regard to the schedule of relevant plans and programmes, the sustainability baseline and the issues identified by the officers workshop and other stakeholders and residents, it is possible to identify key sustainability issues for Castle Point.

### Environmental

- Habitats of international, European and national significance are located within the Borough, although outside the built development boundary. These must be protected from development that would threaten their integrity. Additionally, ancient woodlands, other local wildlife sites and gardens all contribute towards a rich mosaic of biodiversity in Castle Point that should be conserved and enhanced where possible to create an integrated network of habitats.

- Whilst coastal areas of the borough are currently protected by sea defences, there is currently a residual risk of flooding as a result of a breach of those defences. Such a breach would have significant consequences. In the future, as a result of climate change, there will be an actual risk of the sea defences overtopping at high tide. Additionally, other areas of the borough are at risk of surface water flooding, which is also expected to increase as a result of climate change.
- The Thames Estuary currently fails to meet quality standards in respect of chemical loading. Development needs to be aligned with the environmental capacity of Waste Water Treatment Works in south Essex to prevent additional degradation of water quality in the Estuary.
- Water resources in the East of England are limited and therefore efforts need to be made to use water efficiently.
- Air Quality monitoring has revealed air quality issues around key transport corridors in the borough.
- Future development needs to be thermally efficient and resilient to flood risk in order to withstand the effects of climate change.
- The Thames Estuary Landscape and its historic assets are diverse and sensitive to development.
- There is a deficit of open space provision in some areas, most notably in terms of children's playspaces and amenity green areas.
- The purposes of the Green Belt, in particular those associated with the separation of settlements and the protection of the Countryside from development should be protected in order to create a sense of openness in the borough.

### **Social**

- The population of the Castle Point is ageing, presenting the borough with challenges related to social care provision and healthcare provision. This also has consequences for youth services, the economy and for the turnover and value of housing stock in the borough.
- There is a lack of affordable homes in the borough, both in terms of affordable rented homes and also in terms of low cost market housing. This has caused people to choose to live in poor quality accommodation at Thorney Bay Caravan Site resulting in health and social issues arising. Housing land supply should be sufficient to enable a stable and regular supply of new homes that respond to local demand.
- There is a significant pocket of deprivation at West Canvey, caused by issues associated with employment, income, health and education.
- Lung cancer, breast cancer and respiratory diseases are significant causes of mortality in Castle Point.

### **Economic**

- There are high levels of out-commuting for work. Low local wages and a low value economy fail to attract local people to work in the borough.
- Employment areas and town centres are of a poor environmental quality, detracting investment by higher economy employers.
- Additional employment floorspace (3,000m<sup>2</sup> per annum) and retail floorspace (10,000m<sup>2</sup> in total by 2027) is required to accommodate growth sectors and retail growth in order to address employment issues, out-commuting and economic growth requirements.
- Traffic congestion is significant on key routes within the borough, having implications for air quality. This is as a result of over 26,000 people commuting to work by car.

- A high proportion of people commute by rail to work in London, Basildon and Southend for work. However, the railway network restricts access to opportunities for work and leisure in north Essex towns such as Chelmsford.
- The bus network in South Essex is designed to service Basildon and Southend Town Centres, and fails to provide reasonable and cost effective services to the residents of Castle Point to jobs and leisure opportunities on the edge of Basildon and Southend.

The SEA Directive is concerned with the assessment of *'the likely significant effects on the environment of implementing the plan'*, and this requires where possible some understanding of the key issues so that the change that might arise from the influence of the plan can be considered.

From the particular nature of Castle Point, and to the matters over which the LDF has some influence, the environmental assessment of the material concluded that the LDF is likely to be most concerned with the implications of the type, location and design of development and related features such as infrastructure and open spaces.

## Key Issues for the Canvey Town Centre Masterplan

The Canvey Town Centre Masterplan seeks to provide guidance to developers on the location and design of development in Canvey Town Centre, and guide the provision of new infrastructure and open space in this location. To this end, many of the key issues relevant to the whole of Castle Point are also relevant to the Canvey Town Centre Masterplan. In some cases the Canvey Town Centre Masterplan will be able to make a direct contribution towards an issue, for example in providing some of the additional retail floorspace required. In other cases the contribution towards resolving an issue may be indirect, for example development in the town centre may reduce pressures on the edge of towns for development, protecting the Green Belt from development.

**Figure 22: Relationship between sustainability issues and the Canvey Town Centre Masterplan**

Issue	Relationship with the Canvey Town Centre Masterplan
Habitats of international, European and national significance are located within the Borough, although outside the built development boundary. These must be protected from development that would threaten their integrity. Additionally, ancient woodlands, other local wildlife sites and gardens all contribute towards a rich mosaic of biodiversity in Castle Point that should be conserved and enhanced where possible to create an integrated network of habitats.	<b>Indirect and Direct</b> <b>Location of Development</b> The location of development in Canvey Town Centre will relieve pressure on edge of town sites where biodiversity is generally more diverse. Canvey Lake is a local Wildlife Site immediately adjacent to the Town Centre.
Whilst coastal areas of the borough are currently protected by sea defences, there is currently a residual risk of flooding as a result of a breach of those defences. Such a breach would have significant consequences. In the future, as a result of climate change, there will be an actual risk of the sea defences overtopping at high tide. Additionally, other areas of the borough are at risk of surface water flooding, which is also expected to increase as a result of climate change.	<b>Direct</b> <b>Location of Development</b> <b>Design of Development</b> Canvey Town Centre is located in Flood Risk Zone 3a. The design of development in the town centre will therefore be important if people are to remain safe in the event that a flood does occur.
The Thames Estuary currently fails to meet quality standards in respect of chemical loading. Development needs to be aligned with the environmental capacity of Waste Water Treatment Works in south Essex to prevent additional degradation of water quality in the Estuary.	<b>Direct</b> <b>Infrastructure</b> Development in Canvey Town Centre needs to be supported by sufficient Waste Water Treatment Infrastructure to ensure that the quality of discharges do not further reduce the quality of water quality in the Thames Estuary.

Issue	Relationship with the Canvey Town Centre Masterplan
Water resources in the East of England are limited and therefore efforts need to be made to use water efficiently.	<b>Direct</b> <b>Design of Development</b> Development in Canvey Town Centre needs to be designed to be water efficient.
Air Quality monitoring has revealed air quality issues around key transport corridors in the borough.	<b>Direct and Indirect</b> <b>Location of Development</b> The provision of employment opportunities in the town centre reduces the need to travel for work, reducing congestion elsewhere in the borough.
Future development needs to be thermally efficient and resilient to flood risk in order to withstand the effects of climate change.	<b>Direct</b> <b>Design of Development</b> Development in Canvey Town Centre needs to be designed to be thermally efficient, and resilient to flood risk.
The Thames Estuary Landscape and its historic assets are diverse and sensitive to development.	<b>Indirect</b> <b>Design of Development</b> Due to the low lying nature of Canvey Island, a design that promotes tall buildings will impact on the landscape.
There is a deficit of open space provision in some areas, most notably in terms of children's playspaces and amenity green areas.	<b>Direct</b> <b>Infrastructure</b> Development should include the provision of open spaces.
The purposes of the Green Belt, in particular those associated with the separation of settlements and the protection of the Countryside from development should be protected in order to create a sense of openness in the borough.	<b>Indirect</b> <b>Location of Development</b> The location of development in Canvey Town Centre will relieve pressure on the green belt on edge of towns.
The population of the Castle Point is ageing, presenting the borough with challenges related to social care provision and healthcare provision. This also has consequences for youth services, the economy and for the turnover and value of housing stock in the borough.	<b>Direct</b> <b>Infrastructure</b> Development should include facilities for older people and facilities for young people.
There is a lack of affordable homes in the borough, both in terms of affordable rented homes and also in terms of low cost market housing. This has caused people to choose to live in poor quality accommodation at Thorney Bay Caravan Site resulting in health and social issues arising. Housing land supply should be sufficient to enable a stable and regular supply of new homes that respond to local demand.	<b>Direct</b> <b>Type of Development</b> Development in Canvey Town Centre should include some provision of homes.
There is a significant pocket of deprivation at West Canvey, caused by issues associated with employment, income, health and education.	<b>Direct</b> <b>Location of Development</b> <b>Infrastructure</b> Canvey Town Centre is close to west Canvey and should therefore plan for infrastructure that reduces deprivation.



Issue	Relationship with the Canvey Town Centre Masterplan
Lung cancer, breast cancer and respiratory diseases are significant causes of mortality in Castle Point.	<p><b>Direct and Indirect Infrastructure</b> Canvey Town Centre should retain health care infrastructure.</p> <p><b>Location of Development</b> The provision of employment opportunities in the town centre reduces the need to travel for work, reducing congestion and improving air quality elsewhere in the borough.</p>
There are high levels of out-commuting for work. Low local wages and a low value economy fail to attract local people to work in the borough.	<p><b>Direct and Indirect Type of Development</b> The provision of space for professional offices and businesses.</p> <p><b>Infrastructure</b> The provision of education facilities that stimulate economic activity and development.</p>
Employment areas and town centres are of a poor environmental quality, detracting investment by higher economy employers.	<p><b>Direct Design of Development</b> Development designed to offer a high quality public realm.</p>
Additional employment floorspace (3,000m <sup>2</sup> per annum) and retail floorspace (10,000m <sup>2</sup> in total by 2027) is required to accommodate growth sectors and retail growth in order to address employment issues, out-commuting and economic growth requirements.	<p><b>Direct Type of Development</b> The provision of additional employment and/or retail floorspace in Canvey Town Centre.</p>
Traffic congestion is significant on key routes within the borough, having implications for air quality. This is as a result of over 26,000 people commuting to work by car.	<p><b>Direct and Indirect Design of Development</b> Development designed to reduce traffic congestion in Canvey Town Centre.</p> <p><b>Location of Development</b> The provision of employment opportunities in the town centre reduces the need to travel for work, reducing congestion and improving air quality elsewhere in the borough.</p>
A high proportion of people commute by rail to work in London, Basildon and Southend for work. However, the railway network restricts access to opportunities for work and leisure in north Essex towns such as Chelmsford.	<p><b>No relationship</b></p>
The bus network in South Essex is designed to service Basildon and Southend Town Centres, and fails to provide reasonable and cost effective services to the residents of Castle Point to jobs and leisure opportunities on the edge of Basildon and Southend.	<p><b>Direct Infrastructure</b> Canvey town centre is designed to act as a hub for bus routes serving the Island.</p>

Having regard to the Key Sustainability Issues in Castle Point, and their relationship with Canvey Town Centre, it is possible to identify objectives for the Canvey Town Centre Masterplan.

## 5. Sustainability Appraisal Objectives

In light of consideration of plans and programmes, baseline information and consideration of the direct and indirect impacts of the plan on sustainability, sustainability appraisal objectives have been identified, against which the Canvey Town Centre Masterplan can be measured and assessed.

### Purpose of the SA Objectives

Establishing Sustainability Objectives and local targets provides the foundation of the SA process. Their purpose is to provide a benchmark against which the sustainability effects of the DPDs can be identified, described, measured and proposed mitigation methods established.

Sustainability Appraisal is an objectives-led process. This means that the potential impacts of a plan are tested against a series of objectives for sustainable development (e.g. an objective might be *to use resources efficiently*).

Along with any associated indicators and targets, the objectives form the SA Framework. Objectives from other plans and programmes as well as the baseline information collected and sustainability issues identified at earlier stages in the SA can be especially useful in identifying objectives and targets.

It should be noted that the SA objectives are distinct from the LDF objectives though they may in some cases overlap with them. Establishing Sustainability Objectives and local targets provides the foundation of the SA process. Their purpose is to provide a benchmark against which the sustainability effects of the DPDs can be identified, described, measured and proposed mitigation methods established.

### SA Objectives

Figure 23: Sustainability Appraisal Objectives

Objective	Indicator	Target	
1	Conserve and enhance biodiversity and natural habitats in Castle Point.	1. SSSIs in a good or improving condition. 2. Condition of Canvey Lake Local Wildlife Site	100% by 2015
2	Reduce the risk of flooding for current and future residents and businesses.	Developments in Canvey Town Centre approved against the advice of the Environment Agency.	0% (annual monitoring)
3	Canvey WwTWs has sufficient qualitative capacity to accommodate waste from the proposals.	Capacity within the Canvey WwTWs qualitative consent.	Consent not exceeded.
4	Development proposals include a high level of water efficiency.	Water efficiency measured against the Code for Sustainable Homes, or equivalent BREEAM rating for non-residential development.	Residential – Code Level 3 or above. Non-residential – BREEAM Good.
5	Development proposals include a high level of energy and thermal efficiency.	Energy efficiency measured against the Code for Sustainable Homes, or equivalent BREEAM rating for non-residential development.	Residential – Code Level 4 or above. Non-residential – BREEAM Good.
6	Improved air quality across Castle Point.	Number of monitoring points across the borough where NOx levels exceed statutory maximum limits.	Reduction in the number of monitoring points where NOx levels exceed statutory maximum limits.

Objective		Indicator	Target
7	Protect the Thames Estuary Landscape and its historic assets from inappropriate development.	Development in sensitive or highly sensitive landscape areas within the Green Belt.	No instances of development in sensitive or highly sensitive areas within the Green Belt.
8	Make provision for additional high quality public open space.	Additional public open space provided.	Increase in public open space within Canvey Town Centre.
9	Protect the Green Belt from inappropriate development that undermines its stated purposes.	Area of Green Belt lost as a result of development.	Less than 2% (55ha) of the current extent (2750ha).
10	Make provision for the needs of older people and young people.	<ol style="list-style-type: none"> <li>1) Facilities, clubs and services present for older people;</li> <li>2) Facilities, clubs and services present for young people.</li> </ol>	Increase in the facilities, clubs and services available for both older people and young people.
11	Make provision for additional homes, including affordable housing.	<ol style="list-style-type: none"> <li>1) Number of new homes provided in Canvey Town Centre;</li> <li>2) Number of affordable homes provided in Canvey Town Centre.</li> </ol>	<p>Around 400 additional homes</p> <p>35% of the additional homes provided.</p>
12	Reduce the levels of deprivation on Canvey Island.	Indices of Multiple Deprivation overall score.	Reduction in the number of Lower Super Output Areas within the bottom 50% in the Country.
13	Reduce the number of people commuting off of Canvey Island for work.	Number of people who live on Canvey and work on Canvey.	Increase in the number of people who live and work on Canvey Island.
14	Improve the value of local jobs in Castle Point.	Workplace Earnings	Reduction in the difference between local workplace earnings and the national average for workplace earnings.
15	Improve educational attainment at all ages on Canvey Island.	Indices of Multiple Deprivation Education Score.	Reduction in the number of Lower Super Output Areas within the bottom 50% in the Country.
16	Improve the quality of the public realm.	Satisfaction with the quality of the public realm amongst residents living within 1km of Canvey Town Centre.	Increase in the level of satisfaction with the quality of the public realm.
17	Provide additional retail floorspace within town centre locations.	<ol style="list-style-type: none"> <li>1) Area of additional retail floorspace provided;</li> <li>2) Proportion of additional retail floorspace within Town Centre boundaries.</li> </ol>	<p>Around 10,000m<sup>2</sup> by 2027</p> <p>At least 85%</p>

Objective		Indicator	Target
18	Reduce traffic congestion on Canvey Island.	Volume and speed data from traffic counters on strategic routes.	Reduction in peak time volume. Increase in peak time speed.
19	Improve the adequacy of bus services on Canvey Island.	Frequency of day time bus services. Frequency of evening bus services.	Maintain frequency of day time bus services. Increase the frequency of evening bus services.



## 6. Appraisal: Appraising the CTCMP

Having undertaken the scoping stage and identified the sustainability objectives for the Canvey Town Centre Masterplan, these objectives were then used to assess the Canvey Town Centre Masterplan. The following aspects of the Canvey Town Centre Masterplan were assessed:

- 1) The Canvey Town Centre Masterplans Objectives;
- 2) The Options for the Retail Core;
- 3) The Proposals for various aspects of the Town Centre i.e. public realm, highways, community space;
- 4) The Preferred Masterplan Proposals.

The assessment enabled the significant effects of each of the options to be predicted and appraised, enabling a developed and refined preferred option to be identified. Where necessary mitigation has been identified to minimise the adverse effects of any proposals, and to maximise benefits.

It is important that the sustainability appraisal reports the likely significant effects on the environment of any option and proposal in order to fulfill the requirements of the SEA Regulations. This should include a consideration of any interrelationships between different factors within the environment. Effects may be secondary effects, cumulative effects, short, medium or long term effects, permanent or temporary, and both positive and negative.

### Strategic objectives

Through consultation with residents of Canvey Island, and stakeholders such as local retailers, the local authority and the highways authority a series of objectives were identified for the Canvey Town Centre Masterplan<sup>68</sup>. The table at appendix A. compares each of the objectives of the Canvey Town Centre Masterplan with the objectives of the Sustainability Appraisal.

The general outcomes of this assessment are that there is a strong positive relationship between the objectives of the Canvey Town Centre Masterplan and the sustainability appraisal objectives. This is probably a consequence of the high level of engagement undertaken in their formulation. However, there is a single potentially negative relationship that exists between the aim of the masterplan to protect local independent retailers with the sustainability objective of delivering more retail floorspace in town centres. The conflicts that arise are as follows:

- 1) Local independent retailers may experience increased competition for business from new multiple retailers locating in the town centre;
- 2) Local independent retailers may not be able to afford the rent of new floorspace, and will potentially be marginalised to older floorspace;
- 3) Improved performance of retailers in the town centre will see rents across the town centre increase, affecting the profit of smaller retailers.

It is therefore important that a balanced mixture of different sized units is provided across the town centre to enable local retailers to continue to operate. The lack of clarity in the objectives about the balance between different competing land uses results in a number of potential issues being identified i.e. retail vs open space and housing. The plan needs to achieve a balanced mix of different uses if these objectives are not to conflict.

Objectives associated with attracting visitors to the town centre also create potential issues, as this may detract from investment in services for local people, and may also increase traffic movements to the detriment of congestion and air quality in the town centre.

Equally, the Canvey Town Centre Masterplan has an objective to introduce space for outdoor events, festivals and markets. Whilst this is generally considered to have positive sustainability benefits, there is the potential for such events to cause congestion and result in bus services being diverted if the impacts on the road way are not fully considered and appropriate measures not put in place.

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<sup>68</sup> See pages 7 – 9 of the Canvey Town Centre Masterplan for information on the consultation undertaken.

Several of the objectives in the Canvey Town Centre Masterplan seek to reduce the dominance of vehicular movements in Canvey Town Centre, and this is considered to offer sustainability benefits, particularly in relation to health and the environment. However, some members of the community including older people may require the use of private vehicles to get around and therefore a careful balance needs to be struck in this regard in order to ensure people with disabilities are not excluded from the town centre.

Finally, a number of the masterplan objectives propose development. Canvey Town Centre is located in Flood Risk Zone 3a, and therefore it is inevitable that potential conflict will arise between these objectives and the sustainability objective related to reducing the risk from flooding. As Canvey Town Centre cannot be moved, it is necessary to consider throughout the sustainability appraisal whether the mix and design of development is appropriate to ensure that flood risk is adequately responded to.

## Options for the Retail Core

Plan-making should generate well thought out and clearly articulated alternatives and the Sustainability Appraisal should appraise these options in order to identify the option that will have the greatest benefits in terms of sustainability.

The initial issues work on the Canvey Town Centre Masterplan identified that options needed to be developed with regard to the regeneration of the retail core in Canvey Town Centre. It would be this regeneration that would determine the level of investment secured within the town centre and the response to other parts of the town centre such as the Paddocks site (community land to the south west of the town centre). Three reasonable options for the regeneration of Canvey Town Centre were considered during the development of the masterplan (known as options 1 to 3). These, along with the business as usual scenario are assessed in the table at appendix B to:

- a) Highlight the differences between the options (relative performance); and also
- b) To assess the absolute performance of the options against the SA objectives.

Business as Usual does not come out as a particularly suitable option for the town centre. With the exception of water quality, none of the sustainability objectives are met by this option. In several cases the level of sustainability within the town centre will decrease overtime as the situation becomes more severe. In particular, the quality of the public realm and open spaces is expected to decrease, and the lack of any development in the town centre will threaten undeveloped land on the urban periphery including land in the Green Belt and land of nature conservation or landscape value.

Option 1: Refurbishment improves on the business as usual situation, but fails to deliver a long-term solution to some of the sustainability issues. Additionally a lack of sufficient new retail and housing development continues to pose a threat to undeveloped land on the urban periphery.

Option 2: Extension provides additional retail space in the town centre and starts to create a more robust destination for shopping. However, concerns regarding the on going sustainability of the town centre regeneration, and also it fails to provide for housing development. As a result, a threat to undeveloped land on the urban periphery remains.

Option 3: Redevelopment provides both additional retail floorspace and homes in the town centre, creating both a robust destination for shopping and increasing the community benefits of the town centre. As a result, the level of threat posed to undeveloped land on the urban periphery is reduced.

Generally options 2 and 3 offered increased opportunities to delivery development that is designed to reduce flood risk and incorporate water and energy efficient design due to the amount of new development proposed. The Business as Usual and option 1 do not present such an opportunity with retrofitting being expensive and awkward.

Option 2 and 3 do both however increase the likelihood of the town centre becoming more attractive as a destination, potentially resulting in increased congestion rather than encouraging a reduction. This has implications for air quality in the town centre.

Options 2 and 3, as a result of their development proposals also have implications for water quality. However, this should be considered on a wider scale. Failure to deliver the proposed development in the town centre will just result in it occurring on the urban periphery instead. Sites on the urban periphery on Canvey Island are also served by Canvey WwTWs and therefore the impact on Water Quality would be the similar regardless of the option pursued.

None of the options address the issue of the value of local jobs (Objective 14). Any new jobs created in the town centre as a result of any of the proposals will most likely be in retail, which is generally a low pay sector. None of the proposals make provision for other forms of business activity in the town centre. The relatively small size of the town centre compared to other town centres in South Essex, and the range of competing uses may exclude the provision of such a land use in the town centre. Opportunities elsewhere in the borough will need to be sought to improve the value of local jobs, if they cannot reasonably be located in town centre locations.

In relative terms therefore, option 3 appears to be the most appropriate option for the Canvey Town Centre when assessed against the sustainability objectives. However, considering the absolute performance against the sustainability objectives, issues remain in respect of congestion, air quality and water quality in particular.

## Proposals for the various aspects of the Town Centre

Alongside the consultation on the options for the retail core, consultees were asked their views on a number of proposals to improve other aspects of the town centre, including the public realm, the Paddocks Site and the highways network. These proposals when considered alongside the preferred option will provide the opportunity to impact on the sustainability of the final masterplan. To this end, these proposals have also been considered against the sustainability objectives to see if any benefits or negative impacts may exist. A table setting out the results of this assessment can be found at appendix C.

This assessment reveals that the different proposals contribute to varying degrees to the sustainability objectives, however none of the proposals contribute further to Objective 9 (Protecting the Green Belt), Objective 11 (Housing), Objective 13 (Reducing commuting) or Objective 14 (Improving the Value of Local Jobs). These objectives are related more directly to the types of development proposed in the town centre, as considered in the options section above, rather than proposals related to the public realm, open spaces and transport.

Opportunities to green the town centre generally support sustainability objective 1 (Biodiversity), however there is the potential for improved linkages to the lake to cause harm to species and habitats if the level of recreational use is too high in sensitive parts of the lake area. This needs to be fully assessed and managed.

Greening activities also contribute towards helping to manage flood risk and improve water quality by reducing the amount of surface water trying to enter the traditional drainage system. The materials used to calm traffic need to also contribute towards reducing surface water run-off in order that the positive contribution of green elements of the environment is not counteracted by hard surface elements of the environment.

Green features also have a role to play in capturing and reducing pollutants in the environment. To this end, proposals for pocket parks and greening will help to improve air quality. Similarly, opportunities for people to access and use the town centre on foot, by bicycle or by public transport also help to contribute towards a reduction in vehicle emissions and improved air quality. The provision of a multi-storey car park will still encourage people to use their cars to visit the town centre, and therefore this proposal may have negative consequences for the town centre, whilst opening Furtherwick Road, Foksville Road and the High Street to two-way traffic may alter air quality in the town centre. At this time, it is unclear what the impacts of this will be. If, as suggested these amendments reduce congestion then the impact on air quality will be positive.

Green features and the provision of a town square will also provide high quality open space within the town centre. Depending on the quality of the features provided, pedestrian friendly streets and the market place will also contribute towards this objective.

Pocket parks in-particular and also the provision of a community centre comprising a one-stop-shop and youth café will assist in the town centre meeting the specific needs of young people and older people by

providing them with places to meet and engage in social activity. The community facilities also have a role to play in delivering more sustainable development and also in helping to reduce deprivation by providing access for the community to social support mechanisms. Deprivation may also be reduced by providing improved means of access to the town centre by public transport and low cost methods such as walking and cycling.

Generally the proposals set out for the Canvey Town Centre Masterplan would contribute towards improving the quality of the public realm. There is the potential that the provision of a market may however detract from this if it is not laid out and managed properly. A market may also have a negative impact on congestion in the town centre if the closure of the highway is required. This would need to be carefully assessed and managed in order to ensure that any closures do not create congestion. This is particularly important as a number of the proposals seek to reduce congestion including greater provision for alternative transport modes, and also changes to the highway network in the town centre. Balancing the needs of pedestrians by creating more pedestrian friendly streets may however limit the extent to which traffic congestion can be reduced in the town centre.

A key proposal for the town centre is the creation of a bus hub, with improved shelters and real time information. This will help to improve the adequacy of the bus provision on Canvey Island. It is important that improvements to the highway network in the town centre are considered in respect of this objective also so that they do not prevent buses from moving through the town centre with ease.

Overall, the proposals for the town centre respond well to the sustainability objectives, although there are areas where additional detail is needed in order to determine whether there is a potential positive or negative impact. Mitigation measures may be necessary in some circumstances to ensure negative impacts are minimised e.g. the timing and extent of the market may need to be managed to prevent an impact on congestion.

## The Preferred Masterplan Proposals

The options and proposals set out above were subject to consultation with residents and stakeholders. Consistent with the findings of the Sustainability Appraisal process, these residents and stakeholders generally preferred option 3: Redevelopment and there was support for many of the proposals suggested. This information was used to develop a Final Masterplan document. The Masterplan document therefore sets out proposals for the redevelopment of the town centre, including improvements to the public realm, highways and transportation improvements and the creation of community facilities. The table at appendix D. assesses the final preferred masterplan against the sustainability objectives to identify where issues may still exist, and where necessary identifying potential mitigation or other actions that can be taken to ensure sustainability.

This assessment identifies that the delivery of public realm improvements, highways and transportation improvements, and the provision of new community facilities are essential to fulfilling the sustainability objectives. As a result, it is important to ensure that S106 Agreements are put in place to secure the funding needed to provide these improvements to the town centre.

Of particular concern in sustainability terms is the relationship between the town centre and Canvey Lake. The relationship is currently poor. However, the Lake is a Local Wildlife Site, and therefore increased access may result in recreational activities causing harm to biodiversity or habitats. Ecological work has not been carried out to assess the potential impact arising from this proposal. It is essential that when this proposal is progressed, ecological work is carried out, and considered, in order to ensure that nature conservation is not harmed by the proposals.

Canvey Town Centre is located in Flood Risk Zone 3a. Therefore, any development in this location will be at risk of flooding, and will increase the number of people and businesses at risk. It is however not physically possible to relocate Canvey Town Centre without causing substantial harm to the sustainability of the community on the Island, and as a result it is necessary for flood mitigation measures to be taken when delivering proposals in the town centre. A series of flood mitigation measures are identified at page 73 of the masterplan.

Ongoing management and maintenance in the town centre of the public realm and public places and spaces is essential if the proposals set out in the masterplan are to have a sustained positive effect. Failure to maintain the public realm will see the masterplan fail against the sustainability objectives in the long-term.



Whilst these measures will help to ensure that the masterplan achieves many of the sustainability objectives, there are two that are unlikely to be met by the masterplan:

Objective 14: Improve the value of local jobs in Castle Point; and

Objective 18: Reduce traffic congestion on Canvey Island.

**Improve the value of local jobs in Castle Point** is unlikely to be achieved by the masterplan because it largely proposes additional retail floorspace, which is not a high pay sector within the economy. Whilst reference is made within the masterplan to training in retail, it is unlikely that this will have a substantial impact on local wages. This will in turn have implications for Deprivation levels, if residents rely on employment within Canvey Town Centre as their sole income. However, Canvey Town Centre is a relatively small land area, and cannot necessarily accommodate a full range of land uses. There is however a significant area of employment land available for development at West Canvey which may provide the opportunity for higher paying employers to locate on Canvey. When the town centre proposals are considered alongside opportunities in the wider community then the potential to achieve this objective is increased.

**Reduce traffic congestion on Canvey Island** is unlikely to be met, as traffic modelling shows that junctions in the town centre will be closer to capacity as a result of the masterplan compared to currently. However, the delivery of a broader mix of retail and service opportunities in the town centre are expected to reduce the need for people to travel off the island as often to access goods and services. To this end, whilst congestion in the town centre may well increase, congestion elsewhere on Canvey Island would be relieved.

Overall, therefore, it is considered that the masterplan responds well to the sustainability objectives and should therefore provide the opportunity to improve the sustainability of Canvey Town Centre.

## Cumulative and Synergistic Effects

A requirement of Strategic Environmental Assessment is to consider the cumulative and synergistic effects of this plan alongside other plans affecting the area. Appendix E sets out the potential cumulative and synergistic effects of the masterplan and other plans in respect of each objective. Potential sustainability issues arise in respect of flood risk and water quality. Development elsewhere on Canvey Island, when combined with development in the town centre will potentially result in the total number of people at risk of flooding increase. It is important that flood mitigation is used to minimise this cumulative effect. Meanwhile other development not only on Canvey, but also elsewhere in south Essex and north Kent will cumulatively impact on the water quality in the Thames Estuary.

In addition to these environmental problems, there is an issue that there are no robust proposals in place to improve workplace earnings in Castle Point. This has implications in turn for the level of income deprivation and also for the level of commuting. Furthermore, the Canvey Town Centre Masterplan, whilst seeking to secure some homes in the town centre, does not resolve the entire need for homes. To this end, whilst minimising the impact there will overall be a requirement for development in the Green Belt, impacting on landscape character.

Whilst there are some negative cumulative impacts identified, there are also positive cumulative impacts. When combined with the requirements of the Core Strategy, overall energy and water efficiency across the borough should be improved. Furthermore, the provision of more jobs, more retailing opportunities and more services on Canvey as a result of the masterplan and the proposals in the Core Strategy should reduce the need to travel as often, and should improve the viability of public transport provision resulting in increased service provision.

## Secondary Effects

The primary secondary effect of the Canvey Town Centre Masterplan that is expected to arise is that floorspace rents in the town centre will most likely rise. This has implications for independent local retailers, and therefore the local community. The retention of older, smaller units to the west of Furtherwick Road and on the High Street should help to limit this secondary effect, particularly if the overall masterplan is successful in improving vitality in the town centre to the benefit of these retailers.

## Mitigation

The table referred to in the previous section, at appendix D. sets out the need for mitigation to ensure achievement of some of the sustainability objectives. As these mitigation measures have not been incorporated into the masterplan, it is necessary that they are instead set out in the adoption statement for the Canvey Town Centre Masterplan in order to guide development appropriately.

## Conclusion

It is considered that if the mitigation measures identified in appendix D are included within the Adoption Statement, and applied when planning applications for Canvey Town Centre are considered, then the Canvey Town Centre Masterplan should make a positive contribution to sustainability and the environment.

## 7. Monitoring Framework

There is a requirement for a monitoring framework to be put in place to monitor the environmental effects of the implementation of plans and programmes in order that any unforeseen adverse effects can be identified at an early stage, and the necessary remedial action taken.

The indicators identified in the Scoping section of this report will be used to form the monitoring framework.

**Figure 24: Monitoring Framework**

Indicator	Source of Information	Frequency	Expected Trend	When should remedial action be taken?	What remedial action should be taken?
SSSIs in Castle Point in a good or improving condition	Natural England SSSI Condition Surveys	Annual	Improvement	If SSSI Condition at Benfleet and Southend Marshes SSSI, at Canvey Wick SSSI or at Holehaven Creek SSSI falls in 2 or more assessment areas.	Review plan to check that any indirect impacts on the natural environment have been appropriately identified and managed.
Condition of Canvey Lake Local Wildlife Site.	Local Wildlife Site Reviews	Every five years.	Move from declining to improving	If next review shows continued decline associated with human activity.	Develop a Local Wildlife Site Management Plan for Canvey Link and seek S106 contributions towards its implementation.
Capacity existing within Canvey WwTWs qualitative consent to accommodate new development.	Anglian Water	Biannual	At least 10% capacity remaining	If capacity remaining within the qualitative consent drops to less than 10%	Council to liaise with Anglian Water about improving quality processing at Canvey in order that necessary works can be incorporated in AMP before capacity is exceeded.
Proportion of new development in Canvey Town Centre achieving Code for Sustainable Homes Level 3, or BREEAM Good for Water Efficiency.	Planning application and building control records.	Annual	Over 90%	If achievement against this requirement is less than 75%.	Review the plan to provide increased emphasis on the need for water efficiency.

Indicator	Source of Information	Frequency	Expected Trend	When should remedial action be taken?	What remedial action should be taken?
Proportion of new development in Canvey Town Centre achieving Code for Sustainable Homes Level 4, or BREEAM Very Good for Energy Efficiency	Planning application and building control records.	Annual	Over 90%	If achievement against this requirement is less than 75%.	Review the plan to provide increased emphasis on the need for energy efficiency.
Number of monitoring points across the borough where NOx levels exceed statutory maximum limits.	Diffusion tube data collected by Environmental Health Team.	Annual	Reduction	Increase, particularly in relation to monitoring sites on Canvey Island.	Review delivery of plan – are services being provided?  Review transport model – are impacts different to expectations?
Sensitive and highly sensitive areas of the Green Belt landscape remain unchanged	Comparison of planning application records with the Green Belt Landscape Assessment	Annual	No change	If areas of sensitive and highly sensitive of the Green Belt landscape are subject to development	Plan should be reviewed to secure additional housing provision in town centre.
Additional public open space provided.	Area of allocated public open space in Castle Point as measured on GGP.	Annual	Increase	First application for development in Canvey Town Centre that should provide public open space but fails to do so.	Review plan to ensure other public open spaces are delivered.
Area of Green Belt lost as a result of development.	Area of land designated as Green Belt as measured on GGP.	Annual	Decrease	Area lost exceeds 2% (55ha) of current Green Belt extent (2750ha)	Plan should be reviewed to secure additional housing provision in town centre.
Facilities, clubs and services present for older people.	Survey of facilities, services and clubs.	Annual	Increase once delivery commences.	Failure to secure funding for community infrastructure when negotiating delivery of site 1 (Retail Core)	Plan should be reviewed to secure additional funding for community infrastructure from other sources.
Facilities, clubs and services present for young people.					



Indicator	Source of Information	Frequency	Expected Trend	When should remedial action be taken?	What remedial action should be taken?
Number of new homes provided in Canvey Town Centre.	NI154 data	Annual	Increase (400 target)	If a total of at least 50 units have not been provided by 2015. If a total of at least 330 units have not been provided by 2020.	Plan should be reviewed to secure additional housing provision in town centre.
Number of affordable homes provided in Canvey Town Centre.	NI155 data	Annual	Increase (130 target <sup>69</sup> )	If a total of at least 10 affordable homes have not been provided by 2015. If a total of at least 110 affordable homes have not been provided by 2020.	Plan should be reviewed to secure additional affordable housing provision in town centre.
Indices of Multiple Deprivation Overall Score	IMD Data – ONS	Annual	Decrease	If plan has been implemented and IMD Score does not decrease.	Plan should be reviewed to ensure that local people are able to maximize benefits of regeneration.
Number of people who live on Canvey and work on Canvey	Census Data	Once a decade	Increase	If an increase does not occur between 2011 and 2021.	Plan should be reviewed to ensure that local people are able to maximize benefits of regeneration.
	Survey of businesses in Canvey Town Centre.	Biannual	Increase	If data shows that less than 50% of employees are from Canvey Island.	
Workplace earnings	Annual Business Inquiry - NOMIS	Annual	Increase	If data shows decrease in workplace earnings.	Plan should be reviewed to identify whether more business space can be accommodated in town centre.
Indices of Multiple Deprivation Education Score	IMD Data – ONS	Annual	Decrease	If plan has been implemented and IMD Score has not decreased.	Plan should be reviewed to promote more involvement of new school in the community.
Satisfaction with the quality of the public realm amongst residents living within 1km of Canvey Town Centre.	Residents Survey	Biannual	Increase	If plan has been implemented and satisfaction has not increased.	Delivery and maintenance of public realm improvements should be reviewed and improved.

<sup>69</sup> Land at Long Road already has permission at 20% affordable housing – 10 units. This has been added to 35% of remaining units to identify a target.

Indicator	Source of Information	Frequency	Expected Trend	When should remedial action be taken?	What remedial action should be taken?
Area of additional retail floorspace provided in Canvey Town Centre.	Planning Application and Building Control data.	Annual	Increase (10,000m2 borough-wide target).	If a total of at least 2,000m2 has not been delivered by 2015. If a total of at least 5,000m2 has not been delivered by 2020.	Plan should be reviewed to secure additional retail floorspace provision in town centre.
Volume and speed data from traffic counters on strategic routes.	Mouchels on behalf of Essex County Council	Annual	Reduction in peak time volume. Increase in peak time speeds.	If once plan has been implemented, volumes increase and/or speed decrease.	Review transport model – are impacts different to expectations?
Frequency of day time bus services	Bus Timetable Information	Annual	Maintained	If the frequency of day time services decreases.	Seek information from bus service providers as to the reasons and if necessary plan for additional provision.
Frequency of evening bus services	Bus Timetable Information	Annual	Increase	If the frequency of evening services decreases.	Seek information from bus service providers as to the reasons and if necessary plan for additional provision.

The outcomes of monitoring activities will be reported as part of the Council's Annual Monitoring Report. This is produced each year to identify how the Local Development Framework is performing against both planning and sustainability objectives.

**Appendix A: Sustainability Appraisal of Objectives**

SA Objective	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
<b>Canvey Town Centre Masterplan Objective</b>																			
O1 – Establish Canvey Town Centre as a destination while complimenting other attractions on the Island.	-	-	-	-	-	•	-	-	•	-	-	-	•	-	-	•	•	?	-
O2 – Develop an holistic masterplan that proposes a healthy future for all areas of the Town Centres, both old and new.	-	-	-	-	-	-	•	-	-	-	-	-	-	-	-	-	-	-	-
O3 – Create a compact retail destination at the heart of the island with modern retail space.	•	?	?	-	-	-	•	?	•	?	?	•	•	?	-	-	•	-	-
O4 – Recognise and protect the valuable local independent retailers.	-	-	-	-	-	-	-	-	-	-	-	-	-	•	-	-	X	-	-
O5 – Encourage movement between new and existing shopping areas to stimulate and maintain economic viability.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	•	-	-	-
O6 – Empower and activate the strong local community by improving access to and delivering the necessary facilities they need both now and in the future.	-	-	-	-	-	•	-	-	-	•	•	•	•	-	•	-	-	•	-
O7 – Secure investment in the Town Centre to dramatically enhance the retail and service offer.	-	-	-	-	-	-	-	?	•	•	?	•	•	-	•	•	•	-	-
O8 – Establish unique and indispensable roles for areas of the Town Centre to ensure success of new areas but not at the expense of old.	-	-	-	-	-	-	•	-	-	-	-	-	-	-	-	•	-	-	-
O9 – Announce arrival into the Town Centre using gateways, landmarks, spaces and identity.	•	-	-	-	-	-	-	•	-	-	-	-	-	-	-	•	-	-	•
O10 – Bring nature into the Town Centre and improve the environment.	•	-	-	-	-	•	-	•	-	?	?	-	-	-	-	•	?	-	-
O11 – Ensure long term sustainability in the Town Centre through flexibility and the adaptability to future circumstances.	-	•	-	•	•	•	-	-	-	-	-	-	•	-	-	-	-	-	-
<b>Canvey Town Centre Place Making Objectives</b>																			
U1 – Create a series of destinations each with their own role, function and characteristics, but connected by strong linkages and a unifying identity.	-	-	-	-	-	-	•	-	-	-	-	-	-	-	-	•	-	-	-
U2 – Deliver development to provide for a healthy retail led mixture of uses, creating a Town Centre that is vibrant during day and night.	-	?	?	-	?	•	-	?	•	-	?	•	•	•	-	-	•	-	-
U3 – Ensure development is of the appropriate scale for Canvey Island and to deliver a people friendly environment.	-	-	•	-	-	-	•	-	-	•	-	-	?	-	-	•	-	-	-
U4 – Deliver exceptional and lasting quality in the streets, spaces and buildings to develop a legacy befitting Canvey.	-	-	-	•	•	-	-	•	-	-	-	-	-	-	-	•	-	-	-
U5 – Create places within the Town Centre to encourage visitors to come to Canvey for an experience.	-	?	-	-	-	-	?	•	-	?	?	-	-	•	-	-	?	?	-
U6 – Provide strong linkages, both visually and physically between destinations with clear instinctive wayfinding.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	•	-	•	-
U7 – Achieve distinctive character in the built form and public realm.	-	-	-	-	-	-	•	•	-	-	-	-	-	-	-	•	-	-	-
U8 – Develop proposals that balance the needs of the environment, people and vehicles.	•	•	•	•	•	?	-	•	-	•	•	•	-	-	-	-	-	•	•
<b>Canvey Town Centre Spatial Objectives</b>																			
S1 – Develop a series of public spaces providing destinations and space for outdoor events, festivals and town markets.	-	-	-	-	-	•	-	•	-	•	-	-	•	•	•	•	?	?	?
S2 – Create strategic gateway spaces and announce arrival into the Town Centre.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	•	-	-	-
S3 – Create functional spaces where people can walk, cycle, sit and experience the space without barriers.	-	-	-	-	-	•	-	•	-	•	-	-	-	-	-	•	-	-	-
S4 – Create spaces that are suitable for the current users while allowing for adaptation to future uses.	-	•	-	-	-	-	-	•	-	•	-	-	-	-	-	-	-	-	-
S5 – Provide destinations for informal sports, play, relaxation, events and creativity.	•	•	-	-	-	-	-	•	-	•	-	-	•	•	•	-	?	-	-
S6 – Link spaces with pedestrian friendly streets including safe crossings, places to sit and an uncluttered attractive footpath.	-	-	-	-	-	•	-	-	-	•	-	-	-	-	-	•	-	?	-
S7 – Create a socially inclusive environment where all people feel comfortable as users.	-	-	-	-	-	-	-	-	-	•	•	•	-	-	-	•	-	-	-
S8 – Establish a unique character and identity for the Town Centre, encapsulating history and heritage in contemporary style.	-	-	-	-	-	-	•	-	-	-	-	-	-	-	-	•	-	-	-

SA Objective	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
S9 – Green the Town Centre with street trees, shrubs and lawns where appropriate.	•	•	-	-	-	•	•	•	-	-	-	-	-	-	-	•	-	-	-
<b>Canvey Town Centre Movement Objectives</b>																			
M1 – Create pleasant, calm Town Centre environment that is an attractive place for walking and cycling while allowing vehicle movement.	-	-	-	-	-	?	?	?	-	•	-	-	-	-	-	•	-	•	-
M2 – Improve the public realm so the needs of all users of the town centre are met and which also reduces the dominance of moving vehicles.	-	-	-	-	-	•	?	•	-	?	-	-	-	•	-	•	-	?	-
M3 – Promote non-car travel and improved health and well-being by increasing walking and cycling.	-	-	-	-	-	•	-	-	-	?	-	-	-	-	-	-	-	•	-
M4 – Enhance access to services, employment, and other opportunities.	-	-	-	-	-	•	-	-	•	•	•	•	•	-	•	-	•	-	•
M5 – Acknowledge the dual role of the road network in providing access to retail, employment and education, while serving as a through-route to other destinations on and off island.	-	-	-	-	-	?	-	-	-	-	-	-	?	-	-	-	-	•	•
M6 – Create gateways that are linked to the key arrival points to ensure visitors to the Town Centre have positive first impressions.	-	-	-	-	-	-	-	-	-	-	-	-	-	•	-	•	-	-	-
M7 – Provide quality signage in strategic locations to assist visitors and locals in navigating the Town Centre.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	•	-	•	-
M8 – Improve and better integrate bus and taxi operations into the Town Centre.	-	-	-	-	-	•	-	-	-	•	-	-	•	-	-	-	•	•	•

Key:

- Positive Relationship
- X Negative Relationship
- ? Impact of Relationship unclear
- No relationship

## Appendix B: Options Appraisal for the Retail Core

Sustainability Appraisal Objective	Business as Usual			Comments	Option 1: Refurbishment			Comments	Option 2: Extension			Comments	Option 3: Redevelopment			Comments
	Performance				Performance				Performance				Performance			
	Short Term	Medium Term	Long Term		Short Term	Medium Term	Long Term		Short Term	Medium Term	Long Term		Short Term	Medium Term	Long Term	
Objective 1				Potential for retail and housing development to be pushed to urban periphery.				Potential for retail and housing development to be pushed to urban periphery.				Potential for housing development to be pushed to urban periphery.				Quantum of development pushed towards urban periphery reduced.
Objective 2				No change in level of risk.				Limited change in level of risk.				New parts can be designed to reduce risk from flooding.				Redeveloped sites can be designed to reduce risk from flooding.
Objective 3				No change in discharge arising from town centre.				Potential increase in level of discharge.				Potential increase in level of discharge.				Potential increase in level of discharge.
Objective 4				No change in water efficiency.				Limited opportunities to retrofit water efficiency.				Opportunity to incorporate water efficiency in new buildings.				Opportunity to incorporate water efficiency in new buildings.
Objective 5				No change in energy and thermal efficiency.				Limited opportunities to retrofit energy efficiency.				Opportunity to incorporate energy efficiency in new buildings.				Opportunity to incorporate energy efficiency in new buildings.
Objective 6				No change in air quality.				Potential decrease in air quality.				Potential decrease in air quality.				Potential decrease in air quality.
Objective 7				Potential for retail and housing development to be pushed to urban periphery. Historic assets decayed.				Potential for retail and housing development to be pushed to urban periphery.				Potential for housing development to be pushed to urban periphery.				Quantum of development pushed towards urban periphery reduced.
Objective 8				No new space, and quality of existing spaces decline.				No new space but quality of existing maintained.				Some new spaces proposed.				Some new spaces proposed.
Objective 9				Potential for retail and housing development to be pushed to urban periphery.				Potential for retail and housing development to be pushed to urban periphery.				Potential for housing development to be pushed to urban periphery.				Quantum of development pushed towards urban periphery reduced.
Objective 10				Provision unchanged. Issue increase over time.				Small community centre proposed.				Small community centre proposed.				Larger community facility proposed.
Objective 11				Limited new housing provided in town centre.				Limited new homes provided in town centre.				Limited new homes provided in town centre.				Some new homes provided in town centre.
Objective 12				Deprivation likely to increase as town centre declines.				Deprivation likely to decrease but may not be sustained.				Deprivation has the potential to decrease.				Deprivation has the potential to decrease.
Objective 13				Commuting likely to increase as town centre declines.				Commuting may decrease but unlikely to be sustained.				Commuting may decrease but may not be sustained.				Commuting may decrease but may not be sustained.



Sustainability Appraisal Objective	Business as Usual			Comments	Option 1: Refurbishment			Comments	Option 2: Extension			Comments	Option 3: Redevelopment			Comments
	Performance				Performance				Performance				Performance			
	Short Term	Medium Term	Long Term		Short Term	Medium Term	Long Term		Short Term	Medium Term	Long Term		Short Term	Medium Term	Long Term	
Objective 14	Red	Red	Red	Value of local jobs likely to decrease as town centre declines.	Yellow	Yellow	Yellow	Value of local jobs unlikely to increase as no real change in businesses present.	Yellow	Yellow	Yellow	Value of local jobs unlikely to increase as no real change in businesses present.	Yellow	Yellow	Yellow	Value of local jobs unlikely to increase as no real change in businesses present.
Objective 15	Green	Green	Yellow	Impact of new school likely to decline due to quality of nearby environment.	Green	Green	Green	Improvement to town centres will compliment new school.	Green	Green	Green	Improvements to town centre will compliment new school.	Green	Green	Green	Improvements to town centre will compliment new school.
Objective 16	Red	Red	Red	Quality of public realm will decline further.	Green	Yellow	Yellow	Quality of public realm will improve but unlikely to be widespread or sustained.	Green	Green	Green	Quality of public realm improvements wider.	Green	Green	Green	Quality of public realm improvements wider.
Objective 17	Red	Red	Red	Limited provision of additional floorspace.	Yellow	Yellow	Yellow	Some provision of additional floorspace.	Green	Green	Green	Provision of additional floorspace.	Green	Green	Green	Provision of additional floorspace.
Objective 18	Yellow	Yellow	Yellow	Through traffic likely to increase, whilst visits will decrease.	Yellow	Yellow	Yellow	Limited change in congestion likely.	Yellow	Yellow	Yellow	Limited change in congestion levels likely.	Yellow	Yellow	Yellow	Limited change to congestion levels.
Objective 19	Yellow	Yellow	Yellow	Service levels remain unchanged as town centre is not a destination.	Yellow	Yellow	Yellow	Service levels unlikely to change.	Yellow	Green	Yellow	Service levels may increase but is unlikely they could be sustained.	Yellow	Green	Green	Service levels may increase and may be sustained by town centre destination.

**Key**

	Potentially positive sustainability effects
	Potentially negative sustainability effects
	No change in sustainability or effects minimal

## Appendix C: Appraisal of Town Centre Proposals for the Public Realm, Highways and Community Services and Facilities

Sustainability Objectives	Proposals															
	Town Square	Pedestrian friendly streets	Market	Pocket Park/s	Greening	Relationship with Canvey Lake improved.	Bus hub with improved shelters and real time service information	Cycle routes and cycle parking.	Consolidate car parking in a multi-storey car park.	Furtherwick Road and Foksville Road made two-way.	High Street reopened for cars from Furtherwick Road to Eldertree Road.	Different surface materials used to calm traffic.	Foksville Road realigned to calm traffic.	Roads narrowed to make more space for pedestrians.	Out of date street furniture removed.	New space for community facilities including one-stop-shop and youth café.
Objective 1	-	-	-	•	•	•/X	-	-	-	-	-	-	-	-	-	-
Objective 2	-	-	-	•	•	-	-	-	-	-	•/X	-	-	-	-	-
Objective 3	-	-	-	•	•	•	-	-	-	-	•/X	-	-	-	-	-
Objective 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	•
Objective 5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	•
Objective 6	-	•	-	•	•	-	•	•	X	•	?	•	•	?	-	-
Objective 7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Objective 8	•	?	?	•	?	•	-	-	-	-	-	-	-	-	•	-
Objective 9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Objective 10	-	-	-	•	-	-	-	-	-	-	-	-	-	-	-	•
Objective 11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Objective 12	-	-	?	-	-	-	?	?	?	-	-	-	-	-	-	•
Objective 13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Objective 14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Objective 15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	?
Objective 16	•	•	?	•	•	•	•	•	•	-	-	•	-	•	•	-
Objective 17	?	-	?	?	-	-	?	-	•	-	-	-	-	-	-	?
Objective 18	-	-	•/X	-	-	-	•	•	-	•	•	-	-	?	-	-
Objective 19	-	-	-	-	-	-	•	-	?	?	?	-	?	?	-	-

## Key

•	Positive relationship
X	Negative relationship
?	Impact of relationship unclear
•/X	Impact of relationship could produce either negative or positive outcomes
-	No relationship

**Appendix D: Sustainability Appraisal of Final Masterplan Proposals**

Sustainability Objective	Predicted Effect					Justification for Assessment	Mitigation/Action
	Indicator	Nature of Effect	Short Term	Medium Term	Long Term		
Objective 1	LoWS (Canvey Lake)	Unclear	No impact	Potential impact	Ongoing impact	Canvey Lake is a Local Wildlife Site. Increased access to Canvey Lake may impact on nature conservation if not managed.	Ecological assessments to be undertaken and findings considered when planning the Lake Link and other works associated with lake.
Objective 2	EA Objections	Increase	Potential impact	Potential impact	Impact reduced	Proposals seek increase in development. This is likely to increase the number of people and businesses at risk.	The masterplan includes a section on flood risk mitigation (pp 73) that will need to be observed.
Objective 3	WwTWs Qualitative consent	No change	No impact	No impact	No impact	Sufficient capacity currently within Canvey WwTWs qualitative consent <sup>70</sup> .	None required.
Objective 4	Code for Sustainable Homes and BREEAM	Increase in number of developments achieving 3 + for water efficiency	No change	Increase	Increase	New development presents opportunity for integration of sustainable development into design. Masterplan seeks compliance with Code Level 4/BREEAM Excellent.	None required.
Objective 5	Code for Sustainable Homes and BREEAM	Increase in number of developments achieving 4+ for energy efficiency	No change	Increase	Increase	New development presents opportunity for integration of sustainable development into design. Masterplan seeks compliance with Code Level 4/BREEAM Excellent.	None required.
Objective 6	NOx levels across borough	Decrease for sites on Canvey	No change	Decrease	Static at lower level than present	<ul style="list-style-type: none"> <li>• New opportunities for retail, leisure and community reduce need to travel.</li> <li>• Green Travel Plans required for major proposals.</li> <li>• Requirement for all developments to have low NOx boilers.</li> </ul>	None required.
Objective 7	Visual Quality of Landscape	No change	No change	No change	No change	Proposal reduces pressure for development on urban periphery.	None required.
Objective 8	Area of public open space	Increase	No change	Increase	Further increase	Proposals include provision of public open space and improved access to Lake	Ongoing management required to ensure quality.
Objective 9	Area of Green Belt	No change	No change	No change	Non change	Proposal reduces pressure for development on urban periphery.	None required.
Objective 10	Facilities and clubs	Increase	No change	Increase	Static at high level than present	<ul style="list-style-type: none"> <li>• Proposals include the provision of a new community space linking the town centre with the school;</li> <li>• Proposals to improve and expand the Paddocks community building and include new arts and cultural uses and a café.</li> <li>• New public open space proposed to the south of the Lake.</li> </ul>	Section 106 to be used to help secure delivery of social aspects.
Objective 11	New Homes	Unclear	No change	Potential increase	Potential increase	Residential blocks and mixed use elements identified in the Retail Core, the Lake area and the Paddocks Quadrant, however quantum of development not specified.	Clarify quantum of housing development proposed.
Objective 12	IMD Overall Score	Decrease	No change	Decrease	Static at lower level than present	16,000m <sup>2</sup> of additional retail floorspace is proposed. Using English Partnership Employment Density figures this represents up to 640 jobs. This will have a positive implication for the income and employment scores of the IMD.	None required.
Objective 13	Live on Canvey, work on Canvey	Increase	No change	Increase	Static at higher level than present	More jobs in retail in town centre as a result of increased retail floorspace.	None required.
Objective 14	Workplace earnings	Minimal increase	No change	Minimal increase	Minimal increase	<ul style="list-style-type: none"> <li>• Jobs likely to arise are in retail which is a low pay sector. However, proposals include a programme of retail skills training which will potentially allow local people to apply for supervisory/local management positions.</li> <li>• Retail core proposals include flexible space for small business units, but this is not reflected in the plan of the retail core, and therefore it is unclear as to where this would occur.</li> </ul>	Canvey Town Centre covers a relatively small land area, and therefore it is not possible to accommodate all land uses there. To this end, the Council should plan for encouraging different, higher paying sectors elsewhere in Castle Point such as on vacant employment land at West Canvey.

<sup>70</sup> Emerging Watercycle Study

Sustainability Objective	Predicted Effect					Justification for Assessment	Mitigation/Action
	Indicator	Nature of Effect	Short Term	Medium Term	Long Term		
Objective 15	IMD Education Score	Decrease	Decrease	Decrease	Static at a lower level than present.	New school with community learning area currently under construction.	None required.
Objective 16	Satisfaction with Public Realm	Increase	No change	Increase	Remain Static	Section 4 of the masterplan sets out substantial proposals for improving the quality of the public realm in Canvey Town Centre. A public realm strategy is proposed in order to direct the detailed delivery of these public realm improvements.	Maintenance is essential for ongoing satisfaction. Section 106 used to secure funding for public realm improvements.
Objective 17	Retail Floorspace provision	Increase	No change	Increase	Increase	16,000m <sup>2</sup> of additional retail floorspace is proposed. This is in excess of borough wide requirements and therefore ensures that needs are fulfilled.	None required.
Objective 18	Volume and speed data	Increased volume Decreased speed	No change	Increased volume Decreased speed	Increased volume Decreased speed	<ul style="list-style-type: none"> <li>Whilst the distance travelled by cars moving through the town centre will decrease as a result of reintroduction of two-way traffic, modelling of the proposals by MVA shows that junctions will become more congested as a result of the increased development in the town centre. The highways proposals being pursued however are those which are modelled as having the greatest capacity in the long term.</li> <li>The closure of the road network for events/markets will need to be carefully managed, as these would further increase congestion within and around the town centre.</li> </ul>	S106 should be used to ensure the full delivery of highways improvements, and improvements to public transport and cycling facilities.
Objective 19	Frequency of bus services	Increase	No change	Increase	Static at a level higher than present.	Town centre improved as a destination people would want to visit. Improved bus hub.	S106 used to secure improved bus hub.

**Appendix E: Assessment of Cumulative and Synergistic Effects**

	<b>Cumulative and Synergistic Impacts</b>
Objective 1	No proposals elsewhere around Canvey Lake, so affect limited to site.
Objective 2	Development elsewhere on Canvey Island will also increase the number of people and residents at risk.
Objective 3	WwTWs on Canvey has a large amount of spare capacity. However, development elsewhere along the Thames e.g. in Thurrock, Basildon, Southend and in North Kent will contribute towards water quality in the Thames Estuary also.
Objective 4	If higher levels of water efficiency are achieved across Castle Point, the cumulative affect will be a greater reduction in water use than just that achieved in Canvey Town Centre.
Objective 5	If higher levels of energy efficiency are achieved across Castle Point, the cumulative affect will be a greater reduction in energy use than just that achieved in Canvey Town Centre.
Objective 6	When considered alongside the Core Strategy and the Local Transport Plan, the number of people commuting by private vehicle to jobs and services outside the borough should reduce, having a cumulative positive effect.
Objective 7	Whilst the Canvey Town Centre Masterplan will help to limit the need for development on the urban periphery to the benefit of the landscape, it is likely that the Core Strategy will need to identify some development on the urban periphery nonetheless, resulting in an overall reduction in the visual quality of the landscape.
Objective 8	Public open space is protected by policy from development. This proposal increases the area of public open space. There is therefore a cumulative positive affect on open space provision in Castle Point.
Objective 9	Whilst the Canvey Town Centre Masterplan will help to limit the need for development on the urban periphery to the benefit of the Green Belt, it is likely that the Core Strategy will need to identify some development on the urban periphery nonetheless, resulting in an overall reduction in the area of Green Belt.
Objective 10	There are no other known plans that would impact on the provision of facilities and clubs for older and younger people that the Council is aware of. Therefore, there are no known cumulative affects.
Objective 11	When combined with planning proposals for other sites as identified through the Core Strategy, and also via planning applications, there is a cumulative positive impact on the number of new homes planned for Castle Point.
Objective 12	Increased local job opportunities identified through the CTCMP and also the Core Strategy should reduce the level of employment deprivation suffered by some wards on Canvey Island. Failure to provide higher paying jobs may however continue to impact on income deprivation to the detriment of the overall IMD Score and related indicators such as health.
Objective 13	Core Strategy contains proposals for new employment floorspace at West Canvey. Cumulatively, there will be numerous opportunities to live on Canvey and work on Canvey.
Objective 14	Neither the plans for the Town Centre or proposals currently in place for Charfleets and West Canvey indicate how improved workplace earnings will be achieved. Cumulatively there is likely to be a higher proportion of lower paid jobs, resulting in deprivation remaining high in some wards and also impacting on the level of commuting.
Objective 15	Building Schools for the Future Project underway on Canvey at both Furtherwick Park School and at Cornelius Vermuyden School. Proposals are also in place for a Canvey Skills Centre offering vocational training. The cumulative impacts are likely to be positive.
Objective 16	Public realm improvements are also taking place at Charfleets Industrial Estate so cumulative impacts are likely to be positive.
Objective 17	Proposals for Warehouse Style retail at West Canvey have been suitably conditioned to support regeneration of Canvey Town Centre. Cumulative effects are therefore likely to be positive.
Objective 18	The Town Centre Proposals, when considered cumulatively with the proposals for West Canvey are unlikely to provide high paying local jobs. The cumulative impact of this is that volume and speed data will remain unchanged as people continue to commute out of Castle Point for work.
Objective 19	When combined with proposals for Charfleets Industrial Estate, Land East of Canvey Road, Land at Point Road and proposals for the Seafront, as set out in the Core Strategy. There is the potential for the cumulative requirement for public transport provision to increase to levels likely to support more frequent bus service provision.

**Key**

	Potentially positive sustainability effects
	Potentially significant negative sustainability effects
	Potentially minimal negative sustainability effects
	No cumulative sustainability effects