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**Final Sustainability Appraisal and
Strategic Environmental
Assessment Report**

**CANVEY TOWN CENTRE
MASTERPLAN**

2012

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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 been asked to adopt 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.

At the time this report was prepared, there are no local policies on which the CTCMP can be linked due to the withdrawal of the Council's Core Strategy. However, work has commenced on the preparation of a New Local Plan, and that is due to be in place by the spring of 2014. In the meantime, and consistent with the provisions of the Town and Country Planning (Local Planning)(England) Regulations 2012, the CTCMP has been linked to the requirements of the National Planning Policy Framework, in particular paragraph 23, which amongst other things requires *"where town centres are in decline, local planning authorities should plan positively for their future to encourage economic activity"*.

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 policy context and environmental conditions of the borough at present. The policy context and environmental conditions have been drawn up using a wide range of evidence sources, including those evidence base documents used more generally to inform plan making in Castle Point. This work has been the subject of consultation, and has been amended and improved to include the recommendations of consultees.

As a consequence of this process it was possible to identify the following key sustainability issues for Castle Point, and for Canvey Town Centre in particular:

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.
- There is currently a lack of policy to promote energy efficiency in new development within Castle Point, and this will hamper efforts to achieve high levels of energy efficiency within the development proposals set out in the Canvey Town Centre Masterplan.
- 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.
- Waste arising from construction, demolition and commercial/industrial activities is expected to double by 2027 impacting on landfill requirements, the capacity of recycling facilities and the demand for primary aggregates. There is a need to reduce the levels of waste arising from such activities by promoting the re-use of materials on site during development, and also promoting the use of recycled aggregates.

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 (3,000m² per annum) and retail floorspace (10,000m² 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.

From these key sustainability issues, a series of 20 sustainability objectives was derived. These objectives cover the environmental issues, the social issues and the economic issues identified above.

Sustainability Objectives	
1	Conserve and enhance biodiversity and natural habitats in Castle Point.
2	Reduce the risk of flooding for current and future residents and businesses.
3	Development proposals should seek to improve the water quality of water bodies in and around Castle Point.
4	Development proposals include a high level of water efficiency.
5	Development proposals include a high level of energy and thermal efficiency.
6	Improved air quality across Castle Point.
7	Protect the Thames Estuary Landscape and its historic assets from inappropriate development.
8	Make provision for additional high quality public open space.
9	Protect the Green Belt from inappropriate development that undermines its stated purposes.
10	Make provision for the needs of older people and young people.
11	Make provision for additional homes, including affordable housing.
12	Reduce the levels of deprivation on Canvey Island.
13	Reduce the number of people commuting off of Canvey Island for work.

Sustainability Objectives	
14	Improve the value of local jobs in Castle Point.
15	Improve educational attainment at all ages on Canvey Island.
16	Improve the quality of the public realm.
17	Provide additional retail floorspace within town centre locations.
18	Reduce traffic congestion on Canvey Island.
19	Improve the adequacy of bus services on Canvey Island.
20	Promote the minimisation and reuse of waste materials, and the use of recycled materials.

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.

There is however a risk that this option may have a negative impact on the level of waste produced as a result of construction, and on water quality in the Thames Estuary as a result of sewerage discharge. However, in terms of waste there are also opportunities to achieve waste reuse and the use of recycled materials on the site through the development proposed. In terms of sewerage discharge, there is known to be qualitative capacity to accommodate growth of this scale on Canvey Island without exceeding discharge consents.

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.

A particular proposal that gave rise to an environmental concern was the development of land around Canvey Lake to improve the relationship between the Lake and the town. Canvey Lake is a Local Wildlife Site, and whilst the improvements may bring benefits to nature, there is also a risk that additional recreational activity around the lake may disturb nature. Ecological assessments and a management plan will be required to ensure these effects are minimised and result in positive outcomes in terms of biodiversity.

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 measures required are as follows:

- 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. 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.

Waste arising from the proposals in the Canvey Town Centre Masterplan may also have a cumulatively negative impact when considered alongside proposals for other developments across Essex. However, the Site Waste Management Regulations require the management of site waste in a sustainable manner, and therefore this cumulative impact should be managed effectively via regulation.

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.

Introduction

This report is the final sustainability appraisal and strategic environmental assessment report for the Canvey Town Centre Masterplan. This report provides an update to the Consultation Draft Report, which can be found at annex 1. It does not seek to repeat the information contained within the Consultation Draft Report, but rather addresses those issues identified through consultation that took place in the summer of 2011. It also updates the policy context where relevant changes to national and local policy have occurred. It provides a final commentary on the sustainability and environmental implications of the Canvey Town Centre Masterplan, and establishes a monitoring framework in order to ensure that sustainability and environmental implications are appropriately monitored in order that action can be taken to address any unforeseen outcomes of the masterplan as appropriate.

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 been asked to adopt 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.

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Consultation

The consultation undertaken in the summer of 2011 asked consultees to consider a Consultation Draft Sustainability Appraisal that set out a Scoping Report, Sustainability Issues, Sustainability Objectives and an assessment of the sustainability of the options and proposals set out in the Canvey Town Centre Masterplan, including cumulative, synergistic and secondary effects.

The following consultation responses were received in respect of the Consultation Draft Sustainability Appraisal and Strategic Environmental Assessment of the Canvey Town Centre Masterplan:

RSPB

We would support the mitigation measure outlined in Appendix D of the Draft Sustainability Appraisal to carry out an Ecological Assessment when planning the Lake Link and any other works associated with the lake.

No action required as the comment is in support of the sustainability appraisal.

Anglian Water

With regard to the Sustainability Appraisal, Pages 32 and 33, I would re-iterate our comments made to the Southend AAP consultation and included in the South Essex Water Cycle Study stating that surface water separation/removal is required in this location to release any capacity for foul flows. Any surface water management to reduce flows in this manner to Hadleigh will be supported by Anglian Water.

No action required, as the comments are in relation to Hadleigh Town Centre, which is not the subject of this sustainability appraisal.

I support the appraisal in stating the importance of Benfleet and Canvey WwTWs need to remain compliant within the Environmental limits, hence the reason why a WCS is being carried out to ensure that proposed development to these catchments is planned in the most sustainable and cost effective manner.

No action required, as the comment is in support of the sustainability appraisal.

GMPF

The Council should seek s106 contributions in line with the tests set out in Circular 05/05.

No action required, as the matter raised is procedural and will be considered at the time planning applications are made.

Environment Agency

Context Review - We recommend that figure 3 also includes your authority's Strategic Flood Risk Assessment (November 2010). Reference is made to the SFRA in the main text of the SA and so the table should be updated to reflect this.

No action required as figure 3 covers the policy context, and the Strategic Flood Risk Assessment is not a policy document but part of the evidence base. The Strategic Flood Risk Assessment is fully addressed in section 3 – Baseline Review.

Furthermore, we would also suggest that the Essex Thames Gateway Water Cycle Study – Scoping Study – Final Report (March 2009) is also included in figure 3 as this covers key environmental issues including water resources, water quality, and infrastructure capacity.

No action required as figure 3 covers the policy context, and the Watercycle Study is not a policy document but part of the evidence base. The findings of the Watercycle Study are addressed in section 3 – Baseline Review.

Baseline Review

Biodiversity - We consider the information included within the SA in respect of biodiversity to be sufficient. We consider that adequate consideration has been given to possible ecological receptors.

We welcome the inclusion of a green route linking the Town Centre with the Lake. The desire to enhance the biodiversity value is to be encouraged and links to the principles of PPS 9.

No action required, as the comment is in support of the sustainability appraisal.

Flood Risk - Canvey Island is located within Flood Zone 3 and so the inclusion of flood risk as part of the SA is important. Much of Canvey Island is at or below mean high tide level and therefore the Island is reliant on sea defences to protect the area from flooding. A consideration of current risk and risk over the lifetime of developments is therefore a key consideration.

We are pleased to see that all sources of flood risk have been considered within the SA; tidal, fluvial and groundwater. The evidence used in the SA has been based largely upon the Council's recently published Strategic Flood Risk Assessment (SFRA) (November 2010).

We note the inclusion of the composite mapping outputs for all breach scenarios and the hazard rating associated with the different probability flood events. These include the 1 in 1000 year flood event (2010), 1 in 200 year flood event (inclusive of climate change) and 1 in 1000 year flood event (inclusive of climate change). It may also be prudent to include the 1 in 200 year event (2010) to complete the breach scenario outputs.

As recognised in the SA the flood defences are to the design standard of 1 in 1000 years (present day water levels). There will therefore be no overtopping of the defences during the 1 in 200 year and 1 in 1000 year present day flood events. As identified in the SFRA an assessment of the crest heights and extreme water levels including an allowance for climate change has been carried out which identified that some defences would overtop, and are therefore at real risk of flooding during these events. Although this is included in the SFRA, which forms part of the evidence

base, we would advise that this is also clarified within the text of the SA for completeness.

Any additional development on Canvey Island has the potential to create further pressure on the emergency services in the event of flooding and increase the scale of any evacuation required. We are pleased that this aspect has been considered and reference made to this within the numbered points on page 73 of the Town Centre Masterplan.

We are also pleased to see reference to ensuring no new self contained flats or units at ground floor level (if provided at ground floor, units would need to be multi-storey maisonettes or duplex), providing safe refuges, incorporating flood resilience and resistant measures, and including Sustainable Urban Drainage into developments in the Town Centre.

No action required, as the issue of sea defences needing to be upgraded to deal with future flood risk events (real flood risk) is clearly indicated at page 28. The inclusion of the 1 in 200 model would add to the completeness of the baseline report, but for the purposes of the Canvey Town Centre Masterplan would not change the sustainability appraisal objectives or outcomes and this has therefore been noted for inclusion in future SA work only.

Water Quality - We are encouraged to see that the Water Framework Directive status of various water bodies that will ultimately receive treated sewage effluent from the Town Centre development area, have been taken into account. We are also pleased to see that development will be phased, and dependant on, upgrades to sewage treatment works discharging into water bodies at less than good status.

It is important that your authority is satisfied that the local sewage network infrastructure (pipe capacities, pumping stations etc) can cope with any additional demands resulting from Town Centre development. Reference is made to the Water Cycle Study that the Council have been involved in, which is important in ensuring a robust evidence base.

It should be ensured that surface water drainage from new developments does not have a detrimental effect on receiving water bodies from a water quality and Water Framework Directive perspective.

No action required, as the matter of water quality is addressed in the baseline, and an appropriate objective is included in the sustainability appraisal.

Water Resources - It is encouraging that the scarcity of water in Essex has been recognised in the SA and that there is a desire for development within the Canvey Town Centre area to include high water efficiency within building design. It should however be ensured that the local water supply undertaker (Essex and Suffolk Water) is consulted to ensure that the water requirements of the projected development have been included in their future supply plans for the county, and that local infrastructure is sufficient to supply projected needs.

No action required, as Essex and Suffolk Water have been fully consulted on these proposals.

We are pleased to note that section 6.1 of the Canvey Town Centre Masterplan includes environmental and assessment standards which are to be aimed for in aiding water efficiency; these include Code for Sustainable Homes Level 4 for residential dwellings and BREEAM 'Excellent' rating for retail, office and leisure development.

No action required, as the comment is in support of the Canvey Town Centre Masterplan.

Waste - There appears to be no mention of waste and the need to minimise waste within the SA. There is however reference within the Town Centre Masterplan (sections 6.4 and 6.5) to encouraging the use of recycled materials in developments and minimising waste resulting from development which is to be supported.

Developers should take account of how waste will be managed in line with the waste hierarchy both during the development phase (via the Site Waste Management Plan) and once the site is in use. There should be consideration of how construction and demolition waste will be minimised and, where possible, recycled. The incorporation of easy recycling for residents and visitors to the site should also be incorporated into development.

Useful information on these matters can be found at: <http://www.smartwaste.co.uk/>, and [http://www.wrap.org.uk](http://www.wrap.org.uk;); <http://www.tcpa.org.uk/pages/towards-zero-waste.html>.

Additional work has been included within this report on the impact of waste arising from the proposals in the Canvey Town Centre Masterplan.

Sustainability Appraisal Objectives - Section 5 provides information on the SA objectives including; sustainability objectives, indicators and targets.

From figure 23 the sustainability objectives covering economic, social and environmental factors appear to be fairly well balanced in their coverage.

Whilst the sustainability objectives appear to cover the main environmental considerations we would request that objective (3) is widened to cover water quality and ensuring that development does not cause any deterioration in quality.

Amend objective 3 to cover water quality more generally.

Conclusion

As a result of the consultation some additional work was required to include waste within the sustainability appraisal, and to also broaden out the objective related to water quality. This report includes this additional work.

Policy Context

There have been a number of changes to the policy context for the Canvey Town Centre Masterplan since the Consultation Draft Sustainability Appraisal was prepared. These need to be considered as part of this final Sustainability Appraisal and Strategic Environmental Assessment Report in order to ensure that all implications for sustainability and the environment have been fully considered.

Planning Policy - The Local Development Framework

Since the Consultation Draft Report was prepared, there have been substantial changes to the Local Development Framework. The Council's Core Strategy was withdrawn from the examination process due to the need it placed on the Green Belt to accommodate housing development. On withdrawing that plan, the Council committed to preparing a New Local Plan in consultation with residents. Work is underway on a New Local Plan, however it is not significantly advanced at this time and does not provide a policy context for the Canvey Town Centre Masterplan at present.

This clearly has implications for the Canvey Town Centre Masterplan, as supplementary planning documents typically support policies in a Core Strategy or Local Plan. However, the existing Local Plan does not provide policy support for the regeneration of Canvey Town Centre.

It is also likely that there will be some sustainability and environment issues that will emerge as a consequence of the withdrawal of the Core Strategy. Namely, there is no policy "hook" in relation to the higher levels of energy and water efficiency sought by the masterplan in the existing local plan. As a result, design proposals may not deliver the levels of energy and water efficiency envisaged.

This issue will most likely only exist in the short term however. The New Local Plan is programmed for submission to the Secretary of State in August 2013, with adoption due to take place in the spring of 2014. Proposals phased for later in the masterplans programme will therefore be required to meet energy and water efficiency requirements set out in the New Local Plan. In the meantime, opportunities to extend the good will of developers to delivering sustainable design will need to be exploited to reduce the impacts of the masterplan on the environment and sustainability.

Planning Policy - The National Planning Policy Framework

The Consultation Draft Report considered the suite of national Planning Policy Guidance Notes and Planning Policy Statements in order to determine the scope of the assessment. Since the Consultation Draft Report was prepared these documents have been replaced by the National Planning Policy Framework.

Whilst the National Planning Policy Framework (NPPF) substantially reduces the quantum of national planning policy, the overall aim of national planning policy

remains sustainable development, and the importance of jointly delivering economic, social and environmental gains is a key requirement of the policy, as expressed in paragraphs 6 to 9.

With regard to town centre planning, paragraph 23 of the NPPF provides a strong bases for planning for competitive town centres. In particular, it expects local planning authorities to recognise town centres as the heart of their communities and pursue policies to support their viability and vitality, allocate a range of sites to enable a range of retail and non-retail uses to exist with town centres and where town centres are in decline, plan positively for their future. To this end, the Canvey Town Centre Masterplan appears to be entirely consistent with the NPPF.

With regard to sustainability and environmental issues, the NPPF does not present any particular concerns with regard to the proposals in the Canvey Town Centre Masterplan. There is support for sustainable transport modes, good design, community facilities, and the protection and enhancement of natural habitats. Unfortunately, the NPPF does not set standards for energy and water efficiency for applications, and cannot therefore address the lack of policy currently identified in the existing Local Plan. It does however expect local planning authorities to set standards around such matters, and therefore the New Local Plan will need to do so in order to be found sound.

The Regeneration Partnership

Whilst there is no local planning policy context for the Canvey Town Centre Masterplan at present, there remains considerable support from local residents for improvements to Canvey Town Centre. Consultation on Issues for the New Local Plan found that town centre improvements were the second most important opportunity for improving Canvey Island amongst residents.

The Regeneration Partnership also remains committed to the regeneration of the town centre, and has been working to pursue development options as set out in the Masterplan. They have asked the Council to adopt the Canvey Town Centre Masterplan as a Supplementary Planning Document to underpin the partnerships commitment to the regeneration of the centre, and to provide certainty to businesses that may wish to invest in the town.

There are no sustainability issues currently emerging from the ongoing work of the Regeneration Partnership to deliver the Canvey Town Centre Masterplan. However, this organisation is best placed to influence the delivery of energy and water efficiency in new developments in the short term, whilst a policy is developed to ensure such requirements are implemented.

Conclusions

Since the Consultation Draft Report was prepared, the policy context for the Canvey Town Centre Masterplan has changed. However, this has had minimal impact on the sustainability of the Masterplan. The only impact identified, is the potential for

proposals for energy and water efficiency in the Canvey Town Centre Masterplan to be delivered. There is currently no policy hook to enable these requirements to be delivered. That being said, the NPPF required local planning authorities to develop such policies in their Local Plans, and therefore this is likely to only be a short term issue. The Regeneration Partnership are well placed to influence the delivery of such development standards in the interim period.

Environmental Baseline

The environmental baseline for the Canvey Town Centre Masterplan was established in section 3 of the Consultation Draft Sustainability Appraisal. Having regard to the outcomes of consultation, it is considered that this remains fit for purpose in terms of the final sustainability appraisal of the Canvey Town Centre Masterplan. However, it is necessary to expand the baseline to also cover waste. Additional commentary on waste is included below to ensure the completeness of the sustainability appraisal.

Waste and Construction Materials

Essex is the waste planning authority for Castle Point, and significant work has been undertaken to prepare a Waste Development Plan. However, the data reveals that local planning authorities have a key role to play in reducing the amount of waste that is produced across Essex through the application of policy.

The majority of waste in Essex arises from construction and demolition at approximately 50% of total waste produced, followed by commercial and industrial activities at approximately 30%. Municipal waste is predominantly from households and makes up around 20% of total waste produced.

Work undertaken for the preparation of the Waste Development Plan has indicated that in a worst case scenario, the amount of waste arising from construction and demolition and from commercial and industrial activities may double, as demonstrated by the table at figure 1¹.

Increasing waste outputs, particularly in relation to construction and industrial processes has consequences for the amount of land required for landfill. It also has consequences for the amount of primary aggregate extraction required. Both landfill and aggregate extraction can have significant consequences for the landscape, biodiversity and the quality of the environment, as well as depleting natural resources.

Recycling is a key mechanism that can be used to reduce the amount of waste that is sent to landfill, and the amount of primary aggregates extracted. However, recycling requires energy, and where possible therefore re-use of waste should be a primary objective.

¹ Essex Waste Updated Capacity and Needs Report 2009

Figure 1: Waste Estimates for Essex – worst case scenario

	Municipal: Housing + Updated Current Growth	C&I Economic Growth	C&D: Housing + Economic Growth	Haz Economic Growth	Agricultural Economic Growth	TOTAL
2008	732,391	1,559,847	2,972,025	119,231	14,980	5,398,473
2009	739,843	1,611,322	3,090,023	123,165	15,474	5,579,827
2010	747,297	1,664,496	3,211,211	127,230	15,985	5,766,219
2011	754,754	1,719,424	3,335,695	131,428	16,512	5,957,814
2012	762,213	1,776,165	3,463,584	135,765	17,057	6,154,785
2013	769,674	1,834,779	3,594,990	140,246	17,620	6,357,308
2014	777,137	1,895,326	3,730,029	144,874	18,201	6,565,568
2015	784,603	1,957,872	3,868,821	149,655	18,802	6,779,753
2016	792,071	2,022,482	4,011,490	154,593	19,422	7,000,059
2017	799,542	2,089,224	4,158,163	159,695	20,063	7,226,687
2018	807,014	2,158,168	4,308,974	164,965	20,726	7,459,846
2019	814,489	2,229,388	4,464,057	170,409	21,409	7,699,752
2020	821,966	2,302,957	4,623,555	176,032	22,116	7,946,627
2021	829,446	2,378,955	4,787,614	181,841	22,846	8,200,702
2022	836,928	2,457,461	4,956,382	187,842	23,600	8,462,212
2023	838,250	2,538,557	5,108,704	194,041	24,379	8,703,929
2024	839,574	2,622,329	5,266,052	200,444	25,183	8,953,581
2025	840,900	2,708,866	5,428,592	207,059	26,014	9,211,431
2026	842,229	2,798,259	5,596,496	213,891	26,872	9,477,748
2027	843,560	2,890,601	5,769,941	220,950	27,759	9,752,811

Implications for the Canvey Town Centre Masterplan

There is likely to be a significant increase in waste arising across Essex over the next 15 years. Commercial and Industrial Growth and Housing and Economic Growth are likely to be key drivers in this increase. The Canvey Town Centre Masterplan can contribute towards reducing the increase by seeking better management of waste on sites, in particular the reuse of waste (e.g. materials from a demolished building), and the use of recycled aggregates. Failure to address the issue of construction waste will mean that the plan is placing unsustainable pressure on landfill and mineral extraction sites across Essex, and potentially beyond.

Implications of not addressing Waste in the Canvey Town Centre Masterplan

- 1) The cost of waste management will become increasingly expensive, affecting the viability of development and the deliverability of the masterplan.*
- 2) Waste management and mineral extraction will require increasingly large land areas, potentially resulting in negative impacts on the landscape and biodiversity across Essex.*

Conclusion

Feedback from consultation has indicated that the Environmental Baseline set out in the Consultation Draft Sustainability Appraisal was robust. However, additional work has been carried out to include waste issues within the baseline. This will need to be reflected in the sustainability issues identified, the objectives and the assessment.

Sustainability Issues

Having regard to the policy context and the environmental baseline a number of key sustainability issues were identified in the Consultation Draft Sustainability Appraisal. These key sustainability issues were identified as:

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 (3,000m² per annum) and retail floorspace (10,000m² 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.

Additional work undertaken on the context following changes to policy has identified a need to include difficulties in achieving energy efficiency within the list of environmental issues.

- There is currently a lack of policy to promote energy efficiency in new development within Castle Point, and this will hamper efforts to achieve high levels of energy efficiency within the development proposals set out in the Canvey Town Centre Masterplan.

Following consultation additional work was undertaken on the Environmental Baseline to ensure that waste issues have been fully considered. As a result of this work, and additional environmental issue have been identified.

- Waste arising from construction, demolition and commercial/industrial activities is expected to double by 2027 impacting on landfill requirements, the capacity of recycling facilities and the demand for primary aggregates. There is a need to reduce the levels of waste arising from such activities by promoting the re-use of materials on site during development, and also promoting the use of recycled aggregates.

Conclusion

The Consultation Draft Sustainability Appraisal was successful in identifying most of the sustainability issues affecting Castle Point. However, following a review of the policy context and the inclusion of waste issues within the environmental baseline two additional environmental issues have arisen around the policy framework for delivering energy efficient development, and the growth in waste across Essex emerging from construction. These issues will need to be considered throughout the final Sustainability Appraisal including the final set of objectives, the appraisal of options and proposals and the monitoring framework.

Sustainability Appraisal Objectives

Having regard to the key sustainability issues, and the potential relationship between these issues and the Canvey Town Centre Masterplan, a series of sustainability objectives were identified in the Consultation Draft Sustainability Appraisal. In total 19 sustainability objectives were identified as listed below in figure 2.

Figure 2: Sustainability Objectives identified in the Consultation Draft

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.
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.	1) Facilities, clubs and services present for older people; 2) Facilities, clubs and services present for young people.	Increase in the facilities, clubs and services available for both older people and young people.

Objective		Indicator	Target
11	Make provision for additional homes, including affordable housing.	1) Number of new homes provided in Canvey Town Centre; 2) Number of affordable homes provided in Canvey Town Centre.	Around 400 additional homes 35% of the additional homes provided.
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.	1) Area of additional retail floorspace provided; 2) Proportion of additional retail floorspace within Town Centre boundaries.	Around 10,000m ² by 2027 At least 85%
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.

In light of the additional sustainability issues identified in the previous section, it has been necessary to review this list of objectives. Energy efficiency issues are addressed by objective 5, there is no need for additional objective around this point. However, there is no objective related to waste, and therefore an additional objective has been included:

Figure 3: Additional Objective arising from Consultation

Objective		Indicator	Target
20	Promote the minimisation and reuse of waste materials, and the use of recycled materials.	1) % of waste reused on site 2) % of recycled materials used	Increase in the amount of waste reused on site, and the proportion of recycled materials used.

Furthermore, having regard to the consultation response received from the Environment Agency, it is necessary reconsider the wording of objective 3. The Environment Agency would prefer an objective that enables a broad range of water quality impacts and solutions to be addressed. As a consequence objective 3 has been amended as follows:

Figure 4: Amended Objective resulting from Consultation

Objective		Indicator	Target
3	Development proposals should seek to improve the water quality of water bodies in and around Castle Point.	1) Developments approved against the advice of Anglian Water.	0% (annual monitoring)
		2) Ecological and chemical levels in Thames Estuary (EA)	Below current levels, with long term target of achieving Water Framework Directive requirements.
		3) Ecological and chemical levels in Canvey Lake	

Conclusion

The Consultation Draft Sustainability Appraisal identified a comprehensive suite of objectives against which the options and proposals in the Canvey Town Centre Masterplan were assessed. As a result of consultation, objective 3 with regard to water quality was broadened out to ensure that improvements to water quality were achieved more generally, whilst an additional objective (no. 20) was included to address the need to reduce the amount of waste going to landfill. It will be necessary to review the appraisal of the options and proposals for the Canvey Town Centre Masterplan in order ensure that this amended list of objectives is fully reflected in the final appraisal.

Appraisal of the Canvey Town Centre Masterplan

Having assessed the policy context and environmental baseline to identify key sustainability issues, and to identify sustainability objectives, the following elements of the Canvey Town Centre Masterplan have been assessed in terms of their impact on sustainability:

- 1) The Canvey Town Centre Masterplan objectives;
- 2) The Options for the Retail Core;
- 3) The proposals for the various aspects of the Town Centre i.e. public realm, highways and community space; and
- 4) The preferred Masterplan proposals.

It is important that the sustainability appraisal reports the likely significant effects in the environment of any option and proposal in order to fulfil the requirements of the Strategic Environmental Assessment Regulations. This should include 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 negative and positive.

This work was largely undertaken in the Consultation Draft Sustainability Appraisal. However, the amendment to objective 3, and the addition of objective 20, as explained in the previous section, required each part of the assessment to be reviewed as part of this final report.

Strategic Objectives

Through consultation with residents on 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. The table at appendix A updates Appendix A in the Consultation Draft Sustainability Appraisal, and compares each of the objectives in the Canvey Town Centre Masterplan with the revised 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.

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. Objectives associated with the creation of new development in the town centre have the potential to conflict with the objective to reduce waste, and this would need to be managed through the construction process. There are however, objectives that seek to retain existing buildings also, which would see the amount of construction waste arising from the Masterplan minimised.

Canvey Town Centre is located in Flood Risk Zone 3a, and therefore it is inevitable that potential conflict will arise between the masterplan 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. Objectives involving the integration of green spaces and natural spaces into the town centre have the potential to offer positive outcomes in terms of both flood risk, and also for water quality.

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 undertaken 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 have been reassessed against the revised sustainability objectives in the table shown at appendix b. The table:

- a) Highlights the differences between the options (relative performance); and
- b) Assesses the absolute performance of each option against the sustainability objectives.

Business as Usual does not come out as a particularly suitable option for the town centre. With the exception of waste, 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, there are 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. Indeed, the inclusion of green spaces within the proposals for the town centre under the more extensive options 2 and 3 would deliver improvements to the quality of surface water entering the drainage system, mitigating some of the negative impacts of these options.

In all but the business as usual option, the level of waste generated by the regeneration of Canvey Town Centre is likely to increase to the detriment of wider Essex environment. However, the proposals also include both the removal of existing buildings and the creation of new buildings and therefore there are good opportunities to reuse waste materials and to use recycled aggregates within the regeneration.

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, water quality and waste management 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 revised 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.

Several of the proposals require development activity, and as a consequence there are potential issues around waste management arising from them. In particular, amendments to the highways network and the pedestrian areas may give rise to substantial levels of construction waste, and the need for additional materials. How the delivery of these projects is managed will determine whether there are positive or negative consequences for waste management.

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. promoting sustainable waste management, and ensuring that the timing and extent of the market is 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 issue 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.

The development proposals in the Canvey Town Centre Masterplan are likely to generate construction waste, which if unmanaged will increase the amount of waste sent to landfill in Essex. There is however an opportunity through the re-development proposed to reuse waste, and to use recycled materials. The Site Waste Management Plan Regulations will be applicable to the development proposed in the Canvey Town Centre Masterplan, and it is expected that this will act to promote sustainable waste management.

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 is 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.

Furthermore, there are cumulative issues associated with waste management. It is projected that by 2027 the amount of construction waste generated each year across Essex will increase to 5.8m tonnes. The regeneration of Canvey Town Centre will contribute towards this level of waste unless an effective site waste management plan is put in place to limit the impacts of the redevelopment of this site through sustainable waste management.

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 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 the inclusion of the mitigation measures identified in appendix D within the Adoption Statement, and their application considering planning applications for Canvey Town Centre, will ensure that the Canvey Town Centre Masterplan makes a positive contribution to both the Environment and Sustainability. There are no significant environmental impacts that cannot be mitigated against or effectively managed emerging from the masterplans proposals.

Monitoring will be essential to ensure that unforeseen environmental or sustainability impacts do not emerge through the delivery of the masterplan. A monitoring framework is set out in the next section. In the event that such monitoring does reveal unforeseen environmental impacts a review of the masterplan will need to be undertaken.

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 alongside the revised schedule of Objectives form the monitoring framework for the Canvey Town Centre Masterplan.

Figure 5: 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.
Developments in Canvey Town Centre approved against the advice of the Environment Agency.	Planning application records	Annual	0%	If more than 2 development proposals are permitted in Canvey Town Centre against the advice of the Environment Agency.	Council to liaise with the Environment Agency to agree a revised standard for flood risk mitigation, and for this to be communicated to developers.
Developments in Canvey Town Centre approved against the advice of Anglian Water	Planning application records	Annual	0%	If more than 2 development proposals are permitted in Canvey Town Centre against the advice of Anglian Water.	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.
Ecological and chemical levels in the Thames Estuary	Environment Agency	Annual	Improvement	If ecological and chemical levels in the Thames Estuary fall in 2 or more years.	Review plan to check that any opportunities to improve water quality have been identified and acted upon.

Indicator	Source of Information	Frequency	Expected Trend	When should remedial action be taken?	What remedial action should be taken?
Ecological and chemical levels in Canvey Lake	tbc via Wildlife Site Management Plan required for objective 1.	Annual	Improvement	If ecological and chemical levels in Canvey Lake fall in 2 or more years.	Review plan to check that proposals in the Canvey Town Centre Masterplan are not having a direct impact on water quality in Canvey Lake, and act as appropriate.
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.
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.

Indicator	Source of Information	Frequency	Expected Trend	When should remedial action be taken?	What remedial action should be taken?
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.					
Number of new homes provided in Canvey Town Centre.	NI154 data	Annual	Increase (250 target)	If a total of at least 50 units have not been provided by 2015. If a total of at least 200 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 (80 target ²)	If a total of at least 10 affordable homes have not been provided by 2015. If a total of at least 62 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.	

² 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?
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.
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.
% of waste reused on site	ECC – monitoring of Site Waste Management Plans	Annual	Increase	If the % of waste reused on site is less than 40% over 2 or more years.	Council to liaise with Essex County Council to improve on site reuse of waste, and the use of recycled materials via Site Waste Management Plan process.
% of recycled materials used	ECC – monitoring of Site Waste Management Plans	Annual	Increase	If the % of recycled materials used is less than 40% over 2 or more years.	

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 (Objective 3 amended and Objective 20 additional)

SA Objective	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
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.	-	-	-	-	-	-	-	-	-	-	-	-	-	•	-	-	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.	-	•	-	•	•	•	-	-	-	-	-	-	•	-	-	-	-	-	-	•
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.	-	•	-	-	-	-	-	•	-	•	-	-	-	-	-	-	-	-	-	•

SA Objective	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
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.	-	-	-	-	-	•	-	-	-	•	-	-	•	-	-	-	•	•	•	-

Key:

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

Appendix B: Options Appraisal for the Retail Core (Objective 3 amended and Objective 20 additional)

Sustainability Appraisal Objective	Business as Usual				Option 1: Refurbishment				Option 2: Extension				Option 3: Redevelopment			
	Performance			Comments	Performance			Comments	Performance			Comments	Performance			Comments
	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 improvements to water quality likely to arise.				Potential increase in level of discharge. Limited mitigation in plan.				Potential increase in level of discharge. Limited mitigation in plan.				Potential increase in level of discharge. Mitigation in design and green space provision.
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				Option 1: Refurbishment				Option 2: Extension				Option 3: Redevelopment			
	Performance			Comments	Performance			Comments	Performance			Comments	Performance			Comments
	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				Value of local jobs likely to decrease as town centre declines.				Value of local jobs unlikely to increase as no real change in businesses present.				Value of local jobs unlikely to increase as no real change in businesses present.				Value of local jobs unlikely to increase as no real change in businesses present.
Objective 15				Impact of new school likely to decline due to quality of nearby environment.				Improvement to town centres will compliment new school.				Improvements to town centre will compliment new school.				Improvements to town centre will compliment new school.
Objective 16				Quality of public realm will decline further.				Quality of public realm will improve but unlikely to be widespread or sustained.				Quality of public realm improvements wider.				Quality of public realm improvements wider.
Objective 17				Limited provision of additional floorspace.				Some provision of additional floorspace.				Provision of additional floorspace.				Provision of additional floorspace.
Objective 18				Through traffic likely to increase, whilst visits will decrease.				Limited change in congestion likely.				Limited change in congestion levels likely.				Limited change to congestion levels.
Objective 19				Service levels remain unchanged as town centre is not a destination.				Service levels unlikely to change.				Service levels may increase but is unlikely they could be sustained.				Service levels may increase and may be sustained by town centre destination.
Objective 20				No waste from construction generated.				Limited levels of construction waste and commercial waste arising from refurbishment activities.				Some construction waste and commercial waste likely to arise from extension. Opportunities to reuse waste and use recycled aggregates.				Significant construction and commercial waste likely to arise from redevelopment. However, good opportunities to reuse waste and use recycled aggregates.

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 (Objective 3 amended and Objective 20 additional)

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	-	-	-	-	-	-	•	-	?	?	?	-	?	?	-	-
Objective 20	•/X	•/X	-	-	-	-	-	-	?	-	-	-	•/X	-	•/X	-

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	SSSI's in good or improving condition	No effect	No impact	No impact	No impact	Canvey Town Centre is removed from SSSI's. The concentration of people within the urban centre, and the regeneration of the urban environment to create a more attractive location will prevent additional pressure on the SSSI's in the area from occurring.	None required.
	LoWS Condition (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	Anglian Water Objections	No change	No impact	No impact	No impact	Sufficient capacity currently within Canvey WwTWs qualitative consent ³ .	None required.
	Ecological and chemical levels in Thames Estuary	Potential effect	No impact	Potential impact	Ongoing impact	Additional businesses and residents in Canvey Town Centre will add to the level of discharge from Canvey WwTWs, potentially impacting on ecological and chemical levels in the Thames Estuary.	Ensure Anglian Water advice is applied when assessing planning applications. Section 106 to be used to help secure the delivery of green and natural spaces in Canvey Town Centre to reduce impact of surface water quality on ecology and chemical levels.
	Ecological and chemical levels in Canvey Lake	Potential effect	No impact	Potential impact	Ongoing impact	Additional activity in Canvey Town Centre (especially cars) may give rise to pollution of surface water. This may flow directly into Canvey Lake affecting water quality.	Ongoing monitoring of Canvey Lake as part of ecological work required for objective 1. Section 106 to be used to help secure the delivery of green and natural spaces in Canvey Town Centre to reduce impact of surface water quality on ecology and chemical levels.
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"> New opportunities for retail, leisure and community reduce need to travel. Green Travel Plans required for major proposals. Requirement for all developments to have low NOx boilers. 	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.

³ Emerging Watercycle Study

Sustainability Objective	Predicted Effect					Justification for Assessment	Mitigation/Action
	Indicator	Nature of Effect	Short Term	Medium Term	Long Term		
Objective 10	Facilities and clubs	Increase	No change	Increase	Static at high level than present	<ul style="list-style-type: none"> Proposals include the provision of a new community space linking the town centre with the school; Proposals to improve and expand the Paddocks community building and include new arts and cultural uses and a café. New public open space proposed to the south of the Lake. 	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	16,000m2 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"> 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. 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. 	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.
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.	<p>Maintenance is essential for ongoing satisfaction.</p> <p>Section 106 used to secure funding for public realm improvements.</p>
Objective 17	Retail Floorspace provision	Increase	No change	Increase	Increase	16,000m2 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	<p>Increased volume</p> <p>Decreased speed</p>	No change	<p>Increased volume</p> <p>Decreased speed</p>	<p>Increased volume</p> <p>Decreased speed</p>	<ul style="list-style-type: none"> 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. 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. 	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.
Objective 20	% waste reused on site	Low without intervention	No change	Potential to increase	Potential to increase	The preferred approach requires substantial levels of development within Canvey Town Centre. This could generate significant levels of construction waste that if not managed would be sent to landfill. However, new development is proposed, and this presents an opportunity to both reuse waste on-site and to use recycled materials within the construction.	Application of the Site Waste Management Plan Regulations will ensure that construction waste emerging from the development proposed in the Canvey Town Centre Masterplan is minimised, and more waste is reused on site.
	% of recycle materials used	Low without intervention	No change	Potential to increase	Potential to increase		

Appendix E: Assessment of Cumulative and Synergistic Effects (Objective 3 amended and Objective 20 additional)

Objective	Cumulative and Synergistic Impacts
1	No proposals elsewhere around Canvey Lake, so affect limited to site.
2	Development elsewhere on Canvey Island will also increase the number of people and residents at risk.
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.
4	If higher levels of water efficiency are achieved across Castle Point (as a consequence of the New Local Plan), the cumulative affect will be a greater reduction in water use than just that achieved in Canvey Town Centre.
5	If higher levels of energy efficiency are achieved across Castle Point (as a consequence of the New Local Plan), the cumulative affect will be a greater reduction in energy use than just that achieved in Canvey Town Centre.
6	When considered alongside 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.
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 New Local Plan will need to identify some development on the urban periphery nonetheless, resulting in an overall reduction in the visual quality of the landscape.
8	Public open space is protected by National and Local Planning 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.
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 New Local Plan will need to identify some development on the urban periphery nonetheless, resulting in an overall reduction in the area of Green Belt.
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.
11	When combined with other sites to be identified through the New Local Plan, and also via planning applications, there will be a cumulative positive impact on the number of new homes planned for Castle Point.
12	Increased local job opportunities identified through the CTCMP and delivered through improvements to the employment areas by the Regeneration Partnership 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.
13	The existing Local Plan includes proposals for additional employment floorspace at West Canvey. Cumulatively, there will be numerous opportunities to live on Canvey and work on Canvey.
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.

15	New schools have recently been provided at Cornelius Vermuyden and Castle View (former Furtherwick Park site). These were delivered by the County Council through the former building schools for the future programme. Work is currently underway on the delivery of the Canvey Skills Centre, which will offer vocational training. This is being delivered by the County Council as part of the Regeneration Partnership. The cumulative impacts are likely to be positive.
16	Public realm improvements are also taking place at Charfleets Industrial Estate so cumulative impacts are likely to be positive.
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.
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.
19	When combined with proposals for Land at Point Road, Thorney Bay Caravan Park and for employment development at West Canvey, as set out in the existing Local Plan. There is the potential for the cumulative requirement for public transport provision to increase to levels likely to support more frequent bus service provision.
20	The Canvey Town Centre Masterplan is likely to generate construction waste, that if not sustainably managed could result in additional waste going to landfill. It is projected that development across Essex could result in 5.8m tonnes of waste by 2027. Cumulatively, poorly managed construction waste across Essex could have significant consequences for the environment.