Core Strategy

02 Climate Change and Sustainable Development Key Issue Paper

Options for Consideration Consultation
4th October – 24th December 2010

Prepared by Christchurch Borough Council and
East Dorset District Council as part of the Local Development Framework

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1 Introduction

1.1 This background paper has been prepared as part of the Local Development Framework (LDF) to inform the development of the spatial strategy to address the interrelated issues of climate change, sustainable development, renewable energy and flood risk; a strategy to reduce carbon dioxide emissions from motor vehicles is discussed in the Transport Key Issues Paper. This document is one of a number of thematic background papers which address distinct spatial issues affecting Christchurch and East Dorset. The issues addressed have been identified from national, regional and local policy documents, stakeholder and local community engagement, local development framework evidence base and the Community Plans of Christchurch and East Dorset. This document sets out the process of how the spatial strategy for the Christchurch and East Dorset Core Strategy have been refined toward the development of a preferred strategy following Issues and Options work undertaken in spring 2008. This paper sets out the critical issues, problems and challenges to be considered in planning for the future of the two districts. The development of a preferred spatial strategy to address these issues has been informed by the following:

- National and local policy
- Objectives of other relevant plans and programmes (National to local)
- Sustainability Appraisal
- Core Strategy Issues and Options Stakeholder Engagement
- Evidence studies undertaken by the Council and key stakeholders

1.2 The impacts of climate change affect all areas of planning and present one of the biggest challenges for the Christchurch and East Dorset Local Development Frameworks (LDF). Dwindling global reserves of natural resources such as oil and gas mean that wherever appropriate, development plans must provide for new non-fossil fuel energy sources and encourage the use of sustainable materials in construction. New buildings should be more efficient, in terms of both the energy and the water they consume and the amount of heat emitted into the atmosphere. Communities are also faced with the ever greater threat of flooding and coastal erosion as a result of increased rainfall and sea level rise. Conversely, predicted dry summers will cause problems of low flows for some of the chalk downland rivers and river habitats could suffer as a result of continued rates of water abstraction.

1.3 The formulation of a key strategy provides the context for the preparation of specific policies to inform decisions about how best to deliver sustainable development and meet the challenge of climate change. There is also a very significant ‘action planning’ element to the strategy which includes an implementation framework for the delivery of infrastructure and realisation of strategic objectives. Detail of the proposed implementation framework is included within this paper.

2 Baseline

Sustainability Appraisal Baseline Information

2.1 The Christchurch and East Dorset Sustainability Appraisal Draft Scoping Report (August 2008) sets out baseline information and identifies sustainability issues, those relevant to this paper are set out below.

Environmental Baseline Issues

Climate change

2.2 Over the Core Strategy period climate change has the potential to not only affect the environment, but also the social and economic aspects of life in Christchurch and East Dorset. Although the precise nature of environmental changes is not fully understood, changes to precipitation patterns (and river flow) and rising sea level have significant implications particularly for Christchurch. Conversely, predicted hot and dry summers will cause problems of low flows for some of the chalk downland rivers in the area. Additionally, climate change could have a significant impact on agriculture and wildlife throughout the whole area.

Biodiversity

2.3 The Districts contain some of the most rare and precious nature conservation assets in the Country; in Christchurch18.6% and in East Dorset 9.7% of land is protected by some form of nature conservation designation. The integrity of habitats and species will come under threat from changes to annual temperatures, rainfall and sea level rise. The condition of SSSIs in both Districts is unfavourable compared to national standards, due to a combination of poor management and recreational pressures exerted on the heathlands. The effects of climate change may make it harder to restore these sites to a higher quality condition. Abstraction from the River Avon has caused low flow problems, adversely affecting its high nature conservation value. Predicted hot and dry weather in summer months will lead to low river flows, exacerbating abstraction problems.

Countryside and Landscape

2.4 The countryside is continuously under pressure from urban influences and the demand for new development is strong. In terms of land area both Christchurch and East Dorset are primarily rural; in population terms however, only about 20% reside in rural areas. Changes to annual rainfall and river flows could affect the character and function of the countryside and rural settlements. Greenfield sites, potentially within areas of designated landscape value, will come under greater threat from development as increases to the defined flood plains leads to reductions in the quantity of developable sites within existing urban areas.

Historic environment

2.5 There are areas of significant built historic importance and aesthetic quality that should be preserved and enhanced. These are continuously facing pressures for change. Both Christchurch and East Dorset are rich in examples of historic and architectural quality. Across the districts there are 30 designated Conservation Areas, 976 Listed Buildings and 164 Scheduled Monuments. Many are affected by flood risk, particularly within Christchurch. The integrity of Conservation Areas and other protected sites and buildings will be threatened by increases in flood risk as a result of climate change.

Water

2.6 There are a series of rivers that pass through the area that can cause serious flooding. Additionally, Christchurch is threatened by sea level rise. The Stour and Avon flood regularly and wide areas within the Borough of Christchurch are subject to marine or fluvial flood risk. Within East Dorset, the Stour and its tributaries have historically caused serious flooding problems. Flood plains are an important part of the river system, providing necessary water storage. There is a need to ensure development does not impinge on this, or exacerbate flooding elsewhere. A large part of East Dorset district is designated as Groundwater Protection Zones. The amount of water used by households in the area has increased over the past decade, as has the abstraction of water. Water supply in the area is taken from groundwater associated with a chalk aquifer, and the River Stour. The quality and quantity of water to supply future demands is going to be critical to the future levels and location of development that can be accommodated. Water efficiency measures incorporated into new developments is one means of reducing demand for water. Climate change will affect water in many ways through increased rainfall, rising sea level and low flows in summer months on some of the chalk downland rivers.

Energy and carbon

2.7 In 2006, East Dorset consumed 24.1GWh/1000 (giga-watt hours per 1000 people) of energy from gas, petroleum, electricity, coal and other manufactured fuels while Christchurch consumed 21.5GWh/1000, compared with the Dorset county average of 22.5GWh/1000. For commercial use both East Dorset and Christchurch use less kWh per consumer than the average in the South West or Great Britain. There are increasing demands for energy provision predicted for the future. The supply of non-renewable sources is diminishing in the case of carbon based fuels which are becoming more expensive and also contribute to global warming. There is a need to provide alternative, affordable renewable sources of energy, as well as improve energy conservation methods to manage our energy demands better. Some parts of the community experience fuel poverty.

2.8 In 2006, homes in Christchurch and East Dorset emitted 118,000 tonnes and 247,000 tonnes of carbon dioxide ($CO_{2)}$ respectively, industry and commerce emitted 95,000 and 170,000 tonnes respectively, and transport emitted 77,000 and 175,000 tonnes respectively. Residents in Christchurch emitted an average of 6.4 tonnes CO_2 while in East Dorset the figure was 6.8 tonnes; average figures were 6.8 tonnes for Dorset, 8.3 tonnes for the South West region and 8.8 tonnes nationally.

Social Baseline Issues

Housing

2.9 House prices in the area are higher than the national average and wages below the national average. The supply of new housing is constrained by environmental, infrastructure and planning constraints. This coupled with the sale of social houses has resulted in a shortage of affordable housing. A housing needs survey, conducted in 2007 for all Districts in Dorset estimated that in Christchurch 243 affordable homes would be required per year and 440 in East Dorset. Both districts are required to meet regional targets for new housing. Around 180 new homes are built each year in Christchurch, and 320 per year in East Dorset. Christchurch historically achieves a very high proportion of house building on brownfield land (up to 100% some years). In recent years East Dorset has also delivered over 90% of new housing on previously developed sites. The Councils' ability to deliver suitable and affordable new housing to meet local need will be affected by climate change and flooding, the need to use more sustainable building techniques and the need for renewable energy sources.

Economic Baseline Issues

Economy

2.10 Increasing flood risk has the potential to sterilise land for further commercial development. Requirements to build more sustainably and incorporate renewable and low carbon energy will increase commercial development costs.

Tourism

2.11 Tourism is a major part of the local economy, particularly for Christchurch, Wimborne and the rural areas. Rich historic and cultural heritage are important factors in defining the character of the districts, for both residents and visitors. Natural capital, in the form of Areas of Outstanding Natural Beauty, the coast, harbours and beaches, riverside walks and wildlife areas, also serves to attract visitors. Many of these assets will be threatened by the effects of climate change and flooding.

Core Strategic Messages

- Changes to precipitation patterns and river flow and rising sea levels will occur as a result of climate change which has significant implications for Christchurch in particular in terms of increased floodrisk.
- The Councils ability to provide suitable and sufficient housing will be significantly affected by increased floodrisk (particularly in Christchurch) associated with climate change.
- Green field sites will come under increased pressure for development due to increased floodrisk preventing development coming forward in other areas.
- Conservation areas, protected sites and buildings will be affected by increased floodrisk (particularly in Christchurch)
- Increased floodrisk also has implications for the amount of land available to support new commercial development.
- To combat climate change houses will need to meet higher standards of sustainable construction and renewable energy.

- Climate change can have a significant impact on agriculture and wildlife. The integrity of habitats and species will come under threat from changes in annual temperatures, rainfall and sea level rise. This also has implications for the integrity and restoration aspirations for Sites of Special Scientific Interest (SSSIs).
- Tourism may be affected by climate change as increased floodrisk affects the Area of Outstanding Natural Beauty, Christchurch Harbour, Coastline and beaches, riverside walks and wildlife areas.
- The quantity and quality of water to supply future demands will influence the location of development and requirement for water efficiency measures.
- There is a need to provide alternative and affordable sources of renewable energy to address the issue of diminishing supplies from non renewable sources.

Policy Background

2.12 The topics of climate change and flooding, sustainable development, renewable and low carbon energy, and energy efficiency are so closely interlinked in national policy that they are addressed simultaneously through this policy review.

NATIONAL:

- Planning and Compulsory Purchase Act 2004
- Planning and Energy Act 2008
- Planning Act 2008 & White Paper
- Climate Change Act 2008
- Planning Policy Statement 1: Delivering Sustainable Development (2005)
- Supplement to Planning Policy Statement 1: Planning and Climate Change (2007)
- Planning Policy Guidance 20 ‘Coastal Planning’ (1992)
- Planning Policy Statement 22: Renewable Energy & companion guide (2004)
- Planning Policy Statement 25: Development and Flood Risk (2006) and Practice Guide (2009)
- Planning Policy Statement 25 Supplement: Development and Coastal Change (2010)
- Consultation on a Planning Policy Statement: Planning for a Low Carbon Future in a Changing Climate (March 2010)
- Building a Greener Future: Towards Zero Carbon Development (DCLG, 2007)
- Building Regulations, the Code for Sustainable Homes (2008) and the BREEAM assessment method
- Circular 05/05: Planning Obligations (2005)
- The UK Renewable Energy Strategy (2009)
- Home Energy Conservation Act (1995)
- Definition of Zero Carbon Homes and Non-domestic Buildings: Consultation (December 2008)
- The Nottingham Declaration

HAMPSHIRE, DORSET AND SOUTH-EAST DORSET:

- REvision 2020
- Hampshire Avon and Dorset Stour Catchment Flood Management Plans (2009)
- Hampshire Avon and Dorset Stour Catchment Abstraction Management Strategies (2004)
- Draft Water Resources Plan, Bournemouth & West Hampshire Water (2008)
- Poole & Christchurch Bay Shoreline Management Plan (1999)
- Dorset, Bournemouth & Poole Renewable Energy Strategy (2005)
- Dorset, Bournemouth & Poole Energy Efficiency Strategy (2009)

LOCAL:

- East Dorset Local Plan (2002)
- East Dorset Supplementary Planning Guidance 'Flood Risk, Groundwater and Sustainable Drainage' (2005)
- Christchurch Local Plan (2001)
- Dorset Landscape Character Assessment (draft), Christchurch Borough-wide Character Assessment (2003) and Conservation Area Appraisals (2005 to 2009)
- Christchurch Corporate Plan (2008-2012)
- East Dorset Corporate Plan (2010-2016)

Analysis

NATIONAL

Planning and Compulsory Purchase Act 2004

The Act sets out the duty of planning authorities towards sustainability. Section 39 requires that regional and local planning authorities "have a statutory duty when preparing the regional spatial strategy and local development documents to exercise their functions with the objective of contributing to the achievement of sustainable development".

Planning and Energy Act 2008

The Act enables Local Planning Authorities to set requirements for energy generation and energy efficiency in Development Plan Documents. It gives statutory protection to Councils wishing to impose a percentage of energy in new development to come from renewables or low carbon sources (the 'Merton Rule").

Planning Act 2008 and White Paper

Changes to existing planning regimes include insertion of "Development Plan Documents must (taken as a whole) include policies designed to secure that the development and use of land in the local planning authority's area contribute to the mitigation of, and adaptation to climate change" into s.19 of the Planning and Compulsory Purchase Act 2004 (par. 182). The Planning Act takes forward a number of the Planning White Paper proposals. The planning for a Sustainable Future White paper 2007 makes clear its support for tackling and adapting to climate change through the use of the planning system, stating "the planning system also has an important role to play in enabling the UK to meet those challenges. It can help us to meet our targets for the reduction of emissions of greenhouse gases by, for example…..supporting the building of zero-carbon homes and business premises that are low energy and produce lower carbon emissions, and….crucially, planning can help speed up the shift to renewable and low carbon forms of energy (para 11)".

The White Paper also makes clear the role of local authorities in making use of the planning system to tackle climate change: "local planning authorities have a crucial role to play in tackling climate change. We want to see up-to-date development plans to help secure progress against the UK's emissions targets-both through direct influence on energy use and emissions and through bringing together and encouraging action by others" (para 7.9).

Climate Change Act 2008

The Act contains the most ambitious and most influential carbon reduction target to date, an 80% reduction by 2050 (compared with 1990 levels) and an interim target of between 34-42% by 2020 *(see later under the 'Dorset, Bournemouth & Poole Energy Efficiency Strategy for how this target has been interpreted for Dorset)*. Spatial planning through spatial strategies is one of many tools to be used, in particular, to adopt a 'staged approach' to the issue requiring specific reductions of CO2 over the plan period (in our case to 2026).

The key points of the Act include a series of clear targets for reducing carbon dioxide emissions-including making the UK's targets legally binding. It sets out a vision for how the UK can move to a low carbon economy including:

- Investment in low-carbon fuels and technologies, such as carbon capture an storage, wind, wave and solar power;
- Significantly more efficient use of energy
- Consumers becoming producers as well as consumers of energy.

Planning Policy Statement 1: Delivering Sustainable Development (2005)

PPS1 states that development plan policies should take account of environmental issues such as mitigation and adaptation through the reduction of greenhouse gas emissions and the use of renewable energy (para 20), and seek to minimise the need to consume new resources…and should seek to promote and encourage, rather than restrict, the use of renewable resources (para 22). Local authorities should promote resource and energy efficiency, community heating schemes, the use of combined heat and power, and small scale renewable and low carbon energy schemes in development (para 22).

Supplement to Planning Policy Statement 1: Planning and Climate Change (2007)

The PPS strengthens the role of local planning authorities (LPAs) with respect to addressing climate change and providing renewable and low carbon energy production. In particular it states that "in developing their core strategy and supporting local development documents, planning authorities should provide a framework that promotes and encourages renewable and low carbon energy generation. Policies should be designed to promote not restrict low carbon and renewable technologies and the supporting infrastructure" (para.10).

Paragraph 20 states that local planning authorities should consider identifying suitable areas for renewable and low carbon technologies and low-carbon energy sources, and supporting infrastructure, where this would help secure the development of such sources. In addition:

· local planning authorities should "expect a proportion of the energy supply of new development to be secured from decentralised and renewable and low carbon sources".

· it requires local planning authorities to set out a target percentage of the energy to be used in new development to come from decentralised and low carbon sources where it is viable. The target should avoid prescription on technologies.

Importantly para 32 states that when proposing any local requirement for sustainable buildings planning authorities should focus on development area or site-specific opportunities and specify the requirements in terms of achievement of nationally described sustainable buildings standards. Para 33 requires that local planning authorities ensure requirements for decentralised or renewable energy are 'evidence-based and viable, having regard to the overall costs of bringing sites to the market'.

Where local planning authorities consider that local circumstances warrant higher standards for certain elements of the Code for Sustainable Homes, they may 'stipulate a requirement solely in relation to an identified level of the Code'.

The PPS differentiates between climate change mitigation and adaptation stating that spatial planning should "contribute to reducing emissions and stabilising climate change (mitigation) and take into account the unavoidable consequences (adaptation)".

Planning Policy Guidance 20 'Coastal Planning' (1992) / Planning Policy Statement 25 Supplement: Development and Coastal Change:

Published in 1992 PPG20 is one of the oldest national planning guidance notes and has been partly superseded by subsequent policy documents. It adopts a strongly precautionary approach, restricting any development in areas at risk of coastal erosion. PPG20 has now been cancelled except for paragraphs 2.9, 2.10 and 3.9. The PPS25 supplement: Development and Coastal Change replaces policy on managing the impacts of coastal erosion. The PPS25 supplement seeks to prevent new development from being put at risk from coastal change by avoiding inappropriate development in areas that are vulnerable to coastal change and directing development away from areas vulnerable to coastal change. Additionally the risk to development which requires a coastal location is managed over its planned lifetime.

Local planning authorities are required to identify areas likely to be affected by physical changes to the coast and refer to this as the Coastal Change Management Area including identifying the type of development that will be appropriate. These areas should be identified from the risk appraisal undertaken through the production of the Shoreline Management Plan and subsequently identified on the Local Development Framework Proposals Map.

In July 2009 central Government consulted on a new planning policy on Development and Coastal Change which will eventually replace PPG20 completely. The new policy is anticipated to adopt a more flexible risk-based approach similar to PPS25. Where PPG20 currently prohibits all development in areas at risk of coastal erosion, the new policy will permit time-limited or low vulnerability developments where any adverse effects can be successfully mitigated.

Planning Policy Statement 22: Renewable Energy (& companion guide) (2004)

PPS22 promotes the increased development of renewable energy sources. Paragraph 8 states that "local planning authorities may include policies in local development documents that require a percentage of the energy to be used in new residential, commercial or industrial developments to come from on site renewable energy developments". Policies should "ensure that the requirement to generate on-site renewable energy is viable given the type of development proposed, its location and design", and should "not be framed in such a way as to place an undue burden on developers, for example, by specifying that all energy to be used in development should come from on site renewable energy generation".

Planning Policy Statement 25: Development and Flood Risk (2006 / 2009) (& companion guide)

Planning Policy Statement 25 (PPS25) sets out Government policy on development and flood risk. Its aims are to ensure that flood risk is taken into account at all stages in the planning process, to avoid inappropriate development in areas at risk of flooding, and to direct development away from areas of highest risk. Where new development is, exceptionally, necessary in such areas, policy aims to make it safe without increasing flood risk elsewhere and, where possible, reducing flood risk overall. Local authorities will need to ensure that development plans are adapted to climate change, including taking account of future flood risk as highlighted in PPS25.

Sequential Test. The Sequential Test requires Councils to identify reasonable alternative sites outside of flood plains and allocate land accordingly. Only where no alternative sites exist, or where regeneration needs outweigh flood risk, should development be considered within flood risk areas; where reasonable sites exist within zone 1, sites in zone 2 should be considered, then zone 3 as an absolute last resort. Then within the flood zone itself, development should be directed to areas of lowest risk. Reliance on defences to protect new development is not supported.

Forms of development are listed under different 'vulnerability classifications'. The acceptability of development within each Flood Zone is indicated by a tick or cross in the table below:

Flood risk vulnerability classification		Essential infrastructure	Water compatible	Highly vulnerable	More vulnerable	Less vulnerable
Flood zone	Zone 1	ü	ü	ü	ü	ü
	Zone 2	ü	ü	Exception Test required	ü	ü
	Zone 3a	Exception Test required	ü	û	Exception Test required	ü

	Zone 3b (functional floodplain)	Exception Test required	ü	û	û	û

Table 2.2

Reproduced from PPS25, Table D3

The vulnerability of a whole range of development types are classified in table D2 of PPS25. The most important types are residential dwellings (more vulnerable) and buildings used for: commercial purposes such as shops, financial, professional and other services, restaurants and cafés, offices, general industry etc (less vulnerable). The extents of flood zones 1, 2, 3a and 3b are provided by the Strategic Flood Risk Assessments.

If an application passes the Sequential Test, the Exception Test should then be applied to determine if the development can be made safe in terms of its design and access.

Exception Test. For the Exception Test to be passed:

a. it must be demonstrated that the development provides wider sustainability benefits to the community that outweigh flood risk, informed by a Strategic Flood Risk Assessment where one has been prepared. If the Development Plan Document has reached the 'submission' stage – see Figure 4 of PPS12: Local Development Frameworks – the benefits of the development should contribute to the Core Strategy's Sustainability Appraisal;
b. the development should be on developable, previously-developed land or, if it is not on previously developed land, that there are no reasonable alternative sites on developable previously-developed land; and
c. a Flood Risk Assessment must demonstrate that the development will be safe, without increasing flood risk elsewhere, and, where possible, will reduce flood risk overall.

(reproduced from PPS25, paragraph D9)

Other Planning Policy Statements

Other policy context is available from a range of Planning Policy Statements, including those on sustainable development in rural areas (PPS7), biodiversity (PPS9), waste (PPS10), The Code for Sustainable Homes is also referred to in PPS3; "Local Planning Authorities should encourage applicants to bring forward sustainable and environmentally friendly new housing developments, and in doing so should reflect the approach set out in the forthcoming Planning Policy Statement on climate change, including the Code for Sustainable Homes".

Consultation on a Planning Policy Statement: Planning for a Low Carbon Future in a Changing Climate (March 2010)

This PPS is intended to replace the PPS1 supplement 'Planning and Climate Change' and PPS22 'Renewable Energy'. This draft PPS sets out how planning, in providing for new homes, jobs and infrastructure needed by communities, should help shape places to achieve lower carbon emissions and greater resilience to the impacts of climate change.

In particular this draft PPS states that local planning authorities should assess their area for opportunities for decentralised energy and to develop a vision for the area which identifies opportunities for achieving low carbon living. Local requirements for decentralised energy should also be set out in a development plan document. Additionally local authorities should set out how the local authority area will be planned to adapt to the impacts of climate change.

Building a Greener Future: Towards Zero Carbon Development (DCLG, 2007)

Building a Greener Future sets out how Government intend to make all new homes zero carbon from 2016, outlining a timetable to achieve a 25% reduction in carbon emissions from new homes by 2010 and 44% by 2013 before reaching zero carbon in 2016. These mandatory reductions will be implemented through changes to Building Regulations, which will be amended periodically in 2010, 2013 and 2016 to make progressive changes to energy efficiency and carbon requirements. These changes will simultaneously be reflected through incremental increases to the Code for Sustainable Homes level which it will be compulsory for new developments to meet.

Building Regulations, the Code for Sustainable Homes and the BREEAM assessment method

The Code for Sustainable Homes ('the Code') is closely linked to Building Regulations, the national mechanism for enforcing energy efficiency standards in dwellings. It sets minimum standards for energy use at each level. From May 2008 new homes are required to be assessed against the Code, even though it remains voluntary to design and built a home to meet the standards set out in the code. The energy/carbon emission standards set out in the Code will be adopted nationally through progressive changes to Building Regulations. These changes are equivalent to meeting Code level 3 in 2010, level 4 in 2013 and level 6 in 2016 (illustrated in the table below), but only for the energy and carbon emission components of the Code.

However, in addition to the energy/carbon emissions components, the Code measures the sustainability of a new home against 8 other design categories, rating the house as a package. The total 9 design categories (with the associated environmental issues) are:

- Energy and CO2 emissions (mandatory through Building Regulations):
-
    - Dwelling Emission Rate (DER)
    - Building fabric
    - Internal Lighting
    - Drying Space
    - Energy Labelled White Goods
    - External Lighting
    - Low or Zero Carbon Energy Technologies
    - Cycle Storage
    - Home office
- Water

- Indoor Potable Water Use
- External Water Use

- Materials
  - Environmental Impact of Materials
  - Responsible Sourcing of Materials-Basic Building Elements
  - Responsible Sourcing of Materials-Finishing Elements
- Surface water Run-off
  - Management of surface water run-off from developments
  - Flood risk
- Waste
  - Storage of non-recyclable waste and recyclable household waste
  - Construction site waste management
  - Composting
- Pollution
  - Global warming Potential of insulants
  - NOx Emissions
- Health and Wellbeing
  - Daylighting
  - Sound Insulation
  - Private Space
  - Lifetime Homes
- Management
  - Home User Guide
  - Considerate Constructors Scheme
  - Construction site Impacts
  - Security
- Ecology
  - Ecological value of site
  - Ecological enhancement
  - Protection of ecological features
  - Change in ecological value of site
  - Building footprint

The Code only applies to new residential development. In March 2008 the Government stated their ambition that all new non-domestic buildings would be zero carbon from 2019. However, there is no specific national or regional policy in place to deliver the target yet. The BRE Environmental Assessment Method (BREEAM) sets the most widely recognised standards for commercial energy efficiency and sustainable design. BREEAM assesses buildings against a set of criteria and provides a rating of either PASS, GOOD, VERY GOOD, EXCELLENT or OUTSTANDING. Examples nationally include English Partnerships who require that their schemes meet the 'very good' or 'excellent' BREEAM standard, the Housing Corporation 'very good' and the Department of Health 'very good' or 'excellent'.

Part L of the updated Building Regulations (2002) states that the special characteristics of a historic building must be recognised.

Circular 05/05: Planning Obligations

This national circular provides the policy framework within which developer contributions (obligations) can be sought towards essential infrastructure and community needs. A planning obligation must be:

(i) relevant to planning;

(ii) necessary to make the proposed development acceptable in planning terms;

(iii) directly related to the proposed development;

(iv) fairly and reasonably related in scale and kind to the proposed development; and

(v) reasonable in all other respects.

The UK Renewable Energy Strategy (2009)

The strategy is one of the most recently published Government documents on renewable energy and is partly a response to legally binding targets set by the EU Renewable Energy Directive, which includes a UK target of 15% of energy from renewables by 2020. The 15% overall target is broken down into targets for electricity (30% generation by 2020), heat (12% by 2020) and transport (10% by 2020). The planning system is cited as key to successful delivery of the targets and local authorities are encouraged to seek ambitious solutions through a robust evidence-based approach.

Home Energy Conservation Act (1995)

Since 1995, the Home Energy Conservation Act (HECA) has required every UK local authority with housing responsibilities to implement cost effective measures. The Act includes a target for improving energy conservation in dwellings in England & Wales by 30% over a 10-15 year timeframe (from 1996 levels). The Government recently consulted on the future of HECA: it is considering several options, including repealing HECA.

Definition of Zero Carbon Homes and Non-domesticBuildings: Consultation (December 2008)

As set out in Building the Greener Future, government's policy is that all new homes should meet the zero carbon standard from 2016. The Government's preferred approach for meeting this policy has been laid out in this document. The document also reiterates the Government's intention to make all new non-domestic buildings zero carbon from 2019.

The Nottingham Declaration

While not strictly a policy, the Nottingham Declaration is the main way in which local authorities can publicly state their commitment to addressing climate change. Signatories to the declaration pledge to actively tackle climate change in their local area and work with others to reduce emissions nationally. To date, over 200 local authorities have signed it. It has been signed by all local authorities in Dorset.

HAMPSHIRE,DORSET AND SOUTH-EAST DORSET

REvision 2020

The study, funded by the Government Office for the South West and the South West Regional Assembly, informed the production of policies within the draft Regional Spatial Strategy (above). It provides an evidence base and recommended policies and targets for regional planning of renewable electricity and heat. While primarily a research document which informs regional targets, the study does provide some context for the development of district-level policies. It is not in itself adopted policy.

Hampshire Avon and Dorset Stour Catchment Flood Management Plans (CFMP)

The high level strategic CFMPs outline a range of flood management policies, the most relevant of which are:

- Policy P4: take further action to sustain current scale of flood risk into the future (East Dorset)
- Policy P5: take further action to reduce flood risk now and/or in the future (Christchurch)

In the urban areas, strategic flood management works should be sought through new development. Development should not take place within flood plains and SUDS should be used to ensure there are no increases in surface water run off.

Hampshire Avon and Dorset Stour Catchment Abstraction Management Strategies (CAMs)

The Hampshire Avon CAM identifies a need to "ensure that the integrity of the riverine ecosystem is maintained or restored through sustainable water resources management. To achieve this there will be a need to reduce the level and timing of abstraction within the catchment". Both strategies mention potential problems with abstraction of groundwater from chalk catchments and the possible impacts on surface water.

Poole and ChristchurchBay Shoreline Management Plan (SMP)

The SMP determines coastal erosion and flood risk management policies for Poole and Christchurch Bays. The policies for Christchurch at present are as follows (these are due to be revised in 2009/10 with the adoption of SMP2 in July 2010):

-
  - Stanpit and Mudeford: 'hold the defence line'
  - Stanpit Marsh: 'managed realignment'
  - ChristchurchBay: 'mixed management types'

SMP2 is currently being produced which will identify areas likely to be affected by physical changes to the shoreline which will be defined in the Local Development Framework as Coastal Change Management Areas (CCMA). The draft SMP2 currently identifies Mudeford Sandbank as an area for 'managed realignment' throughout the SMP2 period. Stanpit and Mudeford is also identified for 'managed realignment' for the 20 – 50 year period assessed as part of the overall 100 year SMP2 time horizon. SMP2 will be adopted following the publication of the Core Strategy Preferred Options consultation; therefore, it is not possible at this stage to clearly define the CCMA's. A detailed LDF policy incorporating the identification of Coastal Change Management Areas will be set out within the pre submission publication of the Core Strategy. Prior to the adoption of the Core Strategy information from the SMP2 and the Environment Agency should be used for the determination of planning applications coming forward in coastal locations within areas at risk from coastal change.

Dorset, Bournemouth and Poole Renewable Energy Strategy (2005)

Targets reviewed by the study have largely now been superseded. However, many of the actions and recommendations are still current and of relevance to local planning policies. The strategy identifies that landscape character is likely to be the most significant constraint to large scale renewable energy provision in Dorset. The most relevant priority areas that the Core Strategy should respond to are:

- developing positive planning policies for renewable energy
- developing biomass energy and renewable energy from waste
- increasing application of sustainable energy in buildings

Dorset, Bournemouth and Poole Energy Efficiency Strategy (2009)

The strategy interprets the two interim carbon reduction targets set by the Climate Change Act 2008 and suggests a target of 30% reduction in CO_2 emissions by 2020 relative to 1990 levels. The strategy also aims to reduce fuel poverty and sets targets for new and existing dwellings in line with the Standard Assessment Procedure (SAP) for energy performance; an average of 65-70 SAP rating, and no less than 35 SAP rating by 2016. The strategy also includes an objective to increase the energy efficiency of historic buildings. The Strategy seeks to promote better energy efficiency in historic buildings through improvement or renovation works or extensions.

LOCAL

East Dorset Local Plan, 2002

Policy RNDEV1 'renewable energy': reflects national policy and encourages the development of renewable energy sources where they do not cause unacceptable impacts or conflicts. The policy does not set any targets or thresholds.

Policies within the East Dorset Local Plan are underpinned by principles of sustainable development, which are reflected in location, land use, environmental and design policies.

East Dorset Supplementary Planning Guidance 'Flood Risk, Groundwater and Sustainable Drainage', 2005

This Supplementary Planning Guidance provides additional advice to developers to clarify polices in the East Dorset Local Plan (see above). The guidance promotes the inclusion of Sustainable Drainage Systems (SuDS) and provides guidance on the most appropriate forms to be used within developments. It addresses run-off minimisation and water conservation and affords additional protection to local Ground Water Source Protection Zones.

Christchurch Local Plan, 2001

Policy ENV7 & ENV8 'flood plains': restricts any development within flood plains which will impede the flow of water or increase flood risk elsewhere, or which would increase risk due to additional surface water run off.

Policy ENV9 'coastal area': safeguards the marine environment from inappropriate development in terms of access to the coast, harm to its character, geology or coast protection works

Policies within the Christchurch Local Plan are underpinned by principles of sustainable development, which are reflected in location, land use, environmental and design policies.

Dorset Landscape Character Assessment (draft), Christchurch Borough-wide Character Assessment (2003) and Conservation Area Appraisals (various)

These studies highlight the sensitivity of landscape character to large scale wind turbines and other renewables, and urban character to micro-renewables.

Christchurch and East Dorset Corporate Plans

Both plans include corporate objectives to protect the environment and promote sustainability. The Christchurch plan commits to 'maintain a high quality environment' and 'promote more efficient use of energy within the Borough', and East Dorset to 'manage and safeguard the natural and built environment'. In East Dorset, there is also the requirement to ensure that children and young people can identify what action is being taken to address climate change.

Core Strategic Messages (from policy review)

Renewable Energy and Sustainable Construction:

There is a comprehensive body of national policy, guidance and evidence which defines a very clear direction for local policies on renewable energy and sustainable development, set within the wider context of addressing climate change. The weight and clarity of policy advice in PPS1, its supplement and PPS22 define quite narrow parameters within which local authorities can set local requirements beyond those set out at national or regional level. Interim targets for renewable and low carbon energy production had been provided in the former draft Regional Spatial Strategy; local planning authorities may only set targets above these where justifiable local circumstances exist and may only set them for specific locations, not district-wide.

In terms of carbon reduction and energy efficiency, the timescale for mandatory compliance with the Code for Sustainable Homes is set at national level, although there is again flexibility to define local policy where circumstances permit, but only for specified locations. Where insufficient evidence exists to set higher targets, local policies can still encourage developments to achieve higher standards, even if they cannot make strict policy requirements. The Core Strategy must demonstrate that climate change considerations have been incorporated into all relevant policies and that its vision and strategic objectives reflect the national climate change agenda.

Flood Risk:

PPS25 contains very clear guidance to inform local authorities planning for flood risk, allocation of land for development and handling of planning applications. Due to a scarcity of developable land outside of flood risk areas, there is a justifiable need to continue building in flood zones in Christchurch, but only where development can be made safe. The Core Strategy will need to include policies regarding suitable locations, forms of development and appropriate flood attenuation and mitigation measures .

Water Abstraction:

The Environment Agency has identified potential issues with increased water abstraction and threats to the integrity of the River Avon Special Area of Conservation (SAC) and Avon Valley Special Protection Area (SPA). Local policies may also need to consider where additional protection of groundwater sources is required.

Climate Change / Coastal Change

Objectives for climate change are mostly addressed by the other topic areas within this paper. Climate change adaptation and ‘future proofing’ new development should run as a theme throughout the Core Strategy.

The Shoreline Management Plan 2 scheduled for adoption in July 2010 will identify areas likely to be affected by physical changes to the shoreline. Following adoption of SMP2 the Core Strategy will be able to identify Coastal Change Management Areas which should be identified on the Proposals Map. It will also be necessary to determine the type of development that will be appropriate within these areas and where development and infrastructure needs to be relocated from the Coastal Change Management Areas, suitable land should be identified outside the Coastal Change Management Area.

Table 2.1

Community Strategies

Dorset 'Shaping Our Future' (2007-2016)

Christchurch Community Plan (2007)

East Dorset Sustainable Community Strategy (2008)

Analysis

The challenge of climate change runs as a common theme throughout the community strategy for Dorset 'Shaping Our Future' (2007-2016) and several actions commit the county to rising to that challenge. Section C 'Safeguarding Dorset's Environment Now and for the Future' includes several clear statements about the need for sustainable development, energy efficiency and integrated climate change adaptation. Relevant objectives include:

- C1.1.1. In future years a much higher proportion of the housing that is built must be 'affordable' and targeted to meet the needs of local people, key workers and young people. This housing should also be sustainable so it does not exacerbate the global challenge of climate change.
- C1.2.1. there is widespread agreement that climate change is happening and is caused by human behaviour and policies. Urgent action is needed to alter this behaviour and to consider how to adapt to the changes that are predicted.
- C.6. 55% of Dorset residents felt that safeguarding Dorset's unique environment was an important priority for the county council and partners
- C.6.1. Climate change is creating the biggest challenge yet to Dorset's environment, and the way of life for Dorset residents now and in the future. The government has set a goal to cut carbon dioxide emissions by 60% by 2050. This is a significant challenge requiring urgent action by all sectors in Dorset. Dorset needs to lead by example, using influence and action planning to move forward, plan and prepare for a low carbon economy. Local government partners also have a statutory and regulatory role in relation to tackling climate change, particularly through land use and transport planning, building control, energy conservation and waste functions. (paraphrased)
- **C.6.2 What we want to see** - Recognition and response through the partnership to the challenges faced by Dorset due to global climate change
- **C.6.3 How we will make this happen:**
  - C.6.3.1 Develop a climate change adaptation strategy for Dorset.
  - C.6.3.2 Develop a carbon profile for Dorset looking at emissions from energy use, transport and waste and agree county wide carbon reduction targets.
  - C.6.3.3. Develop and implement a cross-sector energy efficiency strategy for Dorset and a plan to tackle fuel poverty and emissions.
  - C.6.3.4 Develop the use of sustainable building techniques across sectors.
  - C.6.3.5 Implement the Bournemouth, Dorset and Poole Renewable Energy Strategy, to maximise the potential of Dorset's renewable energy sources.

- C.6.3.6 Meet the LAA reward element target to increase the capacity and uptake of renewable energy technologies which deliver electricity or heat in the public and community sector in Dorset.
- C.6.3.7 Waste to be reduced, reused, composted, recycled and recovered in line with long term landfill diversion targets.
- C.6.3.8 Help more people to make sustainable choices in their day-to-day lifestyles.
- C.6.3.9 Press for Dorset's local authorities to sign and implement the Nottingham Declaration on Climate Change.

The Christchurch Community Strategy 2007-10 does not specifically address climate change, renewable energy or sustainable development. A primary theme of the High Quality Environment Action Group is the promotion of energy awareness advice however, and environmental quality is reflected strongly through the strategy.

There is clear recognition of climate change and sustainable development within the East Dorset Sustainable Community Strategy 2008. The strategy includes within its vision 'A community in which all development is sustainable and carbon emissions are reduced' and recognises the national climate change agenda within the 'Protecting and enhancing the Environment' theme. The action 'Introduce energy efficient and sustainable building standards' also appears under 'Housing and Development'.

Core Strategic Messages

The county and local community strategies reinforce the national and regional policy requirements reviewed previously in this report. To meet their objectives, the Core Strategy will need to consider policies which respond to the challenge of climate change. In particular these will need to include promotion of sustainable development, energy efficiency, carbon reduction and environmental sustainability.

Table 2.3

3 Identification of Issues

This section considers the validity of the questions posed in the Issues and Options consultation and how appropriate they are for continued consideration by the Core Strategy. A number of new issues have also been raised through the consultation, through discussions with stakeholders and members of the public and through recent changes to national policy. The section concludes with a consolidated list of issues for the development of preferred options in section 4.

Issues and Options Consultation

In March 2008 the Councils conducted a six week public engagement exercise on the Core Strategy, referred to as the 'issues and options' consultation. The document discussed the key planning issues that the Core Strategy will need to address and suggested a range of options to tackle each issue. In all, 210 individuals and organisations responded to the consultation, 137 of whom provided responses to the questions about climate change, renewable energy, sustainable development, flood risk and coastal erosion. Questions asked through the Issues and options consultation were:

CC1: How should our sustainable construction and energy efficiency policies apply to new development?

This issue was primarily raised by national and regional policies which require local authorities to develop local policies which promote sustainable development. Existing policy for the sustainable construction of residential and commercial developments differ and a separate policy approach for each will need to be adopted locally. Local energy efficiency policies are also required to deliver the Bournemouth, Dorset & Poole Energy Efficiency Strategy. This issue is addressed under Issue 1 in section 4 of this paper.

CC2: What proportion of their energy requirements should new developments be required to provide from on-site renewable energy sources?

National policy already sets a target for new housing of 10% energy to be supplied by renewables but there is no equivalent target for commercial developments. Local planning authorities are required to develop local policies which promote renewable and low carbon energy and set higher targets where they are justified by evidence. Local policies are also required to deliver the Bournemouth, Dorset & Poole Renewable Energy Strategy. This issue is addressed under Issue 2 in section 4 of this paper.

CC3: For residential developments, over what threshold should policies require a proportion of energy to be provided through on-site renewables? and;

CC4: For non-residential developments, over what threshold should policies require a proportion of energy to be provided through on-site renewables?

When setting targets for renewable and low carbon energy, local policies will also need to stipulate the threshold above which the policy will apply. This issue is addressed under Issue 2 in section 4 of this paper.

CC5: Are there types of renewable energy development which would be inappropriate in parts of Christchurch and East Dorset?

This issue was raised in response to concerns expressed by residents regarding visual and other disturbance caused by renewable energy technologies such as wind turbines, and impacts on conservation areas and character. Studies produced for the South West region also thrown into question the potential for large scale wind or biomass generation in either Christchurch or East Dorset. This issue is addressed under Issue 2 in section 4 of this paper.

CC6: Should we continue to permit new development in areas of flood risk?

National Planning Policy Statement 25 (PPS25) strongly resists development within areas affected by flooding unless it is essential, can be made safe and does not increase flood risk elsewhere. This issue is addressed under Issue 3 in section 4 of this paper.

CC7: To reduce damage to buildings and risk to life, should we require new developments in the flood plain to incorporate flood resistant and/or resilient measures into their design, on the basis that flood prevention measures will provide protection?

Where development within flood zones is permitted, local policies will be required to ensure it is built appropriately and safely. These issues are more pertinent for Christchurch given the larger scale of flood risk, but policies are required for both districts. This issue is addressed under Issue 3 in section 4 of this paper.

CC8: How should we consider development in areas at risk from coastal erosion?

This issue was identified through Planning Policy Guidance Note 20 and through the Sustainability Appraisal Scoping Report which highlight the need for coastal authorities to adopt policies to guide development in areas of coastal erosion. This issue is addressed under Issue 4 in section 4 of this paper.

Responses to the Issues and Options consultation raised no objections to all of these continuing to be issues for the Core Strategy to address and they are supported by policy and evidence. New issues raised through the consultation are considered below.

New issues raised through consultation

Issue: How do we ensure that new requirements for sustainable construction and renewable energy do not compromise development viability?

Many responses were concerned about the additional financial burden of policies which made requirements beyond those set out in national policy. Any policy requirements must take development viability and profitability into account. This is not a standalone issue; the financial implications of all Local Development Framework policies will need to be considered holistically to determine their likely impact on viability. This issue is addressed by Issue 1 and Issue 2 in section 4 of this paper. Potential impacts on viability will also be considered through the Sustainability Appraisal for preferred options.

New issues raised through evidence studies

Issue: Do we need specific policy to manage appropriate sustainable construction (renovation and repairs) to historic buildings?

Issue identified from the Dorset Energy Efficiency Strategy which seeks to promote better energy efficiency in historic buildings and from Part L of the updated Building Regulations (2002) which states that the special characteristics of a historic building must be recognised when considering applications development. This issue is addressed by Issue 1 in section 4 of this paper.

Issue: How can we make best use of the opportunity for larger-scale energy production provided by the urban extensions and other large developments?

The Strategic Housing Land Availability Assessments demonstrate that the vast majority of new housing developments will be less than 10 dwellings and therefore unlikely to be able to deliver high levels of sustainable development or renewable energy while remaining viable. The urban extensions provide the best opportunities to achieve higher levels of renewable and low carbon energy production. This issue will be considered as part of the master planning process at the urban extensions and is addressed under Issue 2 in section 4 of this paper.

Issue: How can we direct development away from flood risk areas while also continuing to make best use of limited development land?

Interpretation of PPS25 and the findings of the Strategic Flood Risk Assessments raise a number of issues relating to the appropriateness of development within the flood plain. Many developable sites (in Christchurch in particular) lie within identified flood zones and possible solutions may exist to continue to develop these safely. The climate change supplement to PPS1 encourages Councils to recognise where large developments provide opportunities to finance and deliver wider area renewable energy generation or exceptional sustainable development. This issue is addressed by Issue 3 in section 4 of this paper.

Cross-border issues

Issue: How should our policies ensure that sufficient and secure water supply exists to meet the needs of new development and that no harm comes to protected habitats?

Although local water companies have confirmed that they can meet water demand throughout the Core Strategy period, the Environment Agency's Catchment Flood Management Plans identify potential threats to the integrity of the River Avon SAC and Avon Valley SPA from water abstraction. Water abstracted from within East Dorset also serves Christchurch. Ground water sources may require local policy protection to ensure they do not come under threat from development and climate change. This issue is addressed by Issue 1 in section 4 of this paper.

Issue: How will the Core Strategy deliver climate change mitigation and adaptation measures?

The supplement to PPS1 also requires Local Development Frameworks to consider policies which address how existing and proposed development will need to adapt to the effects of climate change, alongside policies which mitigate impacts such as flood risk or low river flows. The issue and options consultation only considered mitigation and not adaptation. This issue is cross border in nature as mitigation and adaptation measures such strategic tree planting. This issue is addressed by Issue 5 in section 4 of this paper.

Summary of Identified Critical Issues

The following issues are the consolidated issues identified from the stakeholder engagement undertaken at 'Issues and Options' and from the baseline information, evidence, and other plans and strategies. Sub issues related to these finalised issues are set out below.

The issues discussed above will be taken forward under section 4 as 'key issues'. Where issues overlap or have strong links, they are amalgamated under the key issues below:

- **Issue 1:How should our sustainable construction and energy efficiency policies apply to new development?** This issue was consulted on at Issues and Options (as issue CC1) and remains an issue for the Core Strategy. The issue has been broadened to consider the specific challenge presented by historic buildings.
  - **How should our policies ensure that sufficient water supply and treatment capacity exists to meet the needs of new development and that no harm comes to protected habitats?** This issue was identified through a review of relevant evidence and is a genuine issue for the Core Strategy.
  - **Do we need specific policy to manage appropriate sustainable construction (renovation and repairs) to historic buildings?** This issue was identified through a review of relevant evidence and is a genuine issue for the Core Strategy.
  - **How do we ensure that new requirements for sustainable construction do not compromise development viability?** This issue was suggested through the Issues and options consultation and is a valid issue for the Core Strategy.
- **Issue 2: How should our renewable, decentralised and low carbon energy policies apply to new development?** This wider issue will incorporate the following issues raised through the Issues and Options consultation and has been broadened to incorporate 'decentralised' (off-site facilities which provide energy across a wider area) and 'low carbon' energy sources:
  - **What proportion of their energy requirements should new developments be required to provide from on-site renewable energy sources?** This issue was consulted on at Issues and Options (as issue CC2) and remains an issue for the Core Strategy.
  - **For residential developments, over what threshold should policies require a proportion of energy to be provided through on-site renewables?** This issue was consulted on at Issues and Options (as issue CC3) and remains an issue for the Core Strategy.
  - **For non-residential developments, over what threshold should policies require a proportion of energy to be provided through on-site renewables?** This issue was consulted on at Issues and Options (as issue CC4) and remains an issue for the Core Strategy.
  - **Are there types of renewable energy development which would be inappropriate in parts of Christchurch and East Dorset?** This issue was consulted on at Issues and Options (as issue CC5) and remains an issue for the Core Strategy.

- **How do we ensure that new requirements for renewable energy do not compromise development viability?** This issue was suggested through the Issues and options consultation and is a valid issue for the Core Strategy.
- **How can our policies make best use of the opportunity for larger-scale energy production provided by the urban extensions and other large developments?** This issue was identified through a review of evidence and is a valid issue for the Core Strategy.

- **Issue 3:How should our policies direct development away from flood risk areas while also making best use of limited development land?** This wider issue will incorporate the following issues raised through the Issues and Options consultation:
  - **Should we continue to permit new development in areas of flood risk?** This issue was consulted on at Issues and Options (as issue CC6) and remains an issue for the Core Strategy.
  - **To reduce damage to buildings and risk to life, should we require new developments in the flood plain to incorporate flood resistant and/or resilient measures into their design, on the basis that flood prevention measures will provide protection?** This issue was consulted on at Issues and Options (as issue CC7) and remains an issue for the Core Strategy.
- **Issue 4: How should we consider development in areas at risk from coastal erosion?** This issue was consulted on at Issues and Options (as issue CC8) and remains an issue for the Core Strategy.
- **Issue 5: How will the Core Strategy deliver climate mitigation and adaptation measures?** This issue was identified as a requirement of national policy.

4 Formation of Options

4.1 The formulation of preferred options set out within this section considers the outcomes of the Core Strategy Issues and Options engagement process, relevant evidence documents, Sustainability Appraisal and Habitats Regulations Assessment. The process includes a critical assessment of the options put forward to address issues identified in the Issues and Options paper. In some instances additional issues have been identified as a result of the issues and options engagement and evidence gathering process which is also examined here.

Issue identified at Issues and Options

CC1 "How should our sustainable construction and energy efficiency policies apply to new development?"

Issues and Options Consultation response

Option	Agree	Disagree	No Opinion	Total
A: Require residential developments to exceed current building control standards for sustainable construction and energy efficiency, even if this results in higher development costs	87	36	8	131
B: Require non-residential developments to exceed current building control standards for sustainable construction and energy efficiency, even if this results in higher development costs	83	37	7	127
C: Other, please specify				26

Table 4.1

4.2 Generally, responses supported adoption of higher (beyond Building Regulations) energy efficiency and sustainable construction standards. The majority supported the application of policies to both new residential (66%) and commercial (65%) developments, even if this resulted in higher development costs. A number of responses from the house building industry raised serious concerns regarding development viability and the final cost of housing, especially in light of the many other financial demands that will be placed on schemes through developer contributions and other policies. Several respondees felt that the current national programme set out in 'Building a Greener Future', the Code for Sustainable Homes and revisions to Building Regulations was adequate and that more ambitious targets could not be justified in Christchurch or East Dorset.

4.3 The Environment Agency gave support for both options A and B in the form of ambitious targets for sustainable construction, conformity with the Code for Sustainable Homes (for residential developments) and BREEAM standards (for commercial). Natural England, the RSPB, Dorset County Council and several town and parish councils also supported higher standards for both residential (option A) and commercial developments (option B). The majority of those who did not support higher standards represented the development industry who were concerned with viability.

Issues and Options Sustainability Appraisal

4.4 Both options A and B have a significant positive impact upon a number of Sustainability Appraisal objectives, most notably objectives 1 (protection of habitats) and 10 (reducing flooding) due to the long term environmental benefits of carbon reduction, and objectives 4, 5, 6, 8 and 11 (minimising materials, waste, pollution, water and non-renewable resources) – elements which are all intrinsic to sustainable development. The only identified negative impact was for option A under objective 13 (affordable housing) due to concerns that increased development costs resulting from new sustainable construction methods may affect development viability. Studies nationally have concluded that this effect would decline in the medium to long term once those methods became the industry standard. Option B provides sustainability benefits in addition to option A (they are not mutually exclusive). Wider impacts on development viability are also a concern with both options A and B.

Consideration of Evidence and Policy

4.5 The Climate Change Act (2008) requires an 80% cut in CO2 emissions by 2050, compared with 1990 levels. This equates to a 42% reduction by 2020. The Dorset Energy Efficiency Strategy adopts the 2020 target, but updates it in respect to 2005 baseline data provided by DEFRA. This results in a target of 30% reduction in CO2 emissions by 2020, compared with 2005 levels. As this target is in line with the most recent national policy situation, Christchurch and East Dorset Core Strategy policies should aim to meet that target.

4.6 The document 'Evidence Base for the Bournemouth & Poole, and Weymouth and Dorchester Strategic Housing Market Assessment (2008)' provides figures for the energy efficiency of the existing private sector housing stock in relation to the Standard Assessment Procedure (SAP) rating:

Local Authority	Average SAP rating of private sector dwellings (non Registered Social Landlord)	% of private sector (non RSL) dwellings with SAP below 35
Christchurch	50	7% (2005 figure)
East Dorset	54	9% (2006 figure)

Table 4.2

4.7 The findings of the Strategic Housing Land Availability Assessments demonstrate that the majority of development will need to be delivered on small sites (generally five dwellings or less). Only the urban extensions - and a very few potential developments within the urban areas - will be of a scale substantial enough to meet higher standards for sustainable construction while remaining viable. However, the Dorset Affordable Housing and Developer Contribution Viability Study (Three Dragons, draft June 2009) concludes that Code for Sustainable Homes level 3 is the maximum that can be achieved within the urban extensions (in current market conditions), assuming a 40% affordable housing contribution and £15,000 contribution towards other infrastructure. Unfortunately therefore, these 'circumstances at the local level' prohibit the adoption of policies which set higher standards for sustainable construction and energy efficiency for housing within the urban extensions. The range and total sum of financial demands which will be placed on new development for affordable housing and other essential infrastructure means that the Councils cannot adopt ambitious policies for residential sustainable construction as they may render developments unviable. Commercial developments are not similarly affected by the need to contribute towards affordable housing but will be required to contribute towards transport and other infrastructure.

Conclusions and implications for preferred options

4.8 Although the results of the issues and options consultation generally support adoption of local policies for sustainable construction and energy efficiency and the Councils are keen to realise the potential of the urban extensions, local circumstances (as evidenced by the Dorset Affordable Housing and Developer Contribution Viability Study) demonstrate that higher standards are simply not viable for residential development. The additional costs of providing affordable housing and other essential infrastructure are more fully justified by local evidence and will take priority over ambitions to achieve sustainable construction standards which are higher than those required by national policy. Commercial developments will also be required to contribute towards infrastructure and it is not yet clear whether higher standards could be achieved within the bounds of viability. It will be possible to make clearer judgements concerning development viability following completion of the infrastructure plan for the urban extensions completed as part of the master planning process. If there is scope for higher standards then they will be considered.

4.9 In terms of satisfying the requirements of paragraph 31 of the climate change supplement, the local and regional evidence base does demonstrate local circumstances which warrant setting higher standards for water efficiency (see issue discussed below), but not for other carbon reducing elements of the Code for Sustainable Homes. Options to address this issue are set out below under **Issue 1:'How should our sustainable construction and energy efficiency policies apply to new development?'.**

Issue identified through consultation or the evidence base

Issue: How should our policies ensure that sufficient water supply and treatment capacity exists to meet the needs of new development and that no harm comes to protected habitats?

Consideration of Evidence and Policy

4.10 Since the issues and options consultation in March 2008, the Councils have established a need to consider higher standards for water efficiency across the districts. This is driven by a need to protect the integrity of the River Avon Special Protection Area (SAC) and meet the requirements of Habitats Regulation Assessment. The Environment Agency Catchment Abstraction Management Strategy for the Hampshire Avon identify potential threats to the river's Special Area of Conservation and Special Protection Area designations if water abstraction increases as a result of major development. In recognition of this threat the Environment Agency stated a desire to see "immediate steps to greatly improve the water efficiency of new homes" (Regional Spatial Strategy: South West, Housing Growth and Water Supply in the South West of England 2005 to 2030, Environment Agency, March 2005). The Agency expressed support for achieving a minimum of Code for Sustainable Homes level 3 for water efficiency of 105 litres per person per day (in their representation to the Regional Assembly on the Proposed Changes to the Regional Spatial Strategy, the Agency, 24 October 2008). Through a letter to the Councils in September 2009 the Agency restated its recommendation for local policies to require compliance with Code level 3 for water efficiency in Christchurch and East Dorset.

4.11 Bournemouth and West Hampshire Water Company supply both Christchurch and East Dorset districts. Approximately 80% of supply is through river extraction along the Dorset Stour and the Hampshire Avon, with the remaining 20% drawn from groundwater sources. Daily consumption rates (156 litres per person per day) are high compared with the national average (150 litres) partly as a result of the more affluent demographic of much of the population and the high number of tourists, particularly in summer. These rates far exceed Government's stated ambition to achieve an average of 130 litres per person per day by 2030 (Future Water, 2008).

4.12 Bournemouth and West Hampshire Water Company's recently adopted Water Resource Plan (2009) concludes that the additional demand for water up to 2026 created by development in Christchurch and East Dorset can be met without the need to increase abstraction rates on the Avon or Stour. The Plan forecasts that, through a demand management programme based largely on water efficiency measures incorporated into new and existing housing and possible changes to charging tariffs, demand in 2035 will be less than at present. However, in their response to the draft Water Resources Plan in August 2008, Natural England expressed concerns regarding potential threats to river habitats and requested that stricter water efficiency measures be considered as a means to meet the Government's figure of 130 litres per person per day and ensure sensitive habitats are not harmed.

4.13 The Environment Agency define 'Ground Water Source Protection Zones' around important underground aquifers in East Dorset from which water supplies are drawn.

4.14 Wessex Water – providers of sewerage to both Christchurch and East Dorset – have indicated that in general, sufficient sewerage capacity exists to meet the demands of new housing delivered up to 2026. However, limitations may exist at certain locations and may need careful consideration at the urban extensions.

Conclusions and implications for preferred options

4.15 Responses from the Environment Agency, Natural England and Bournemouth and West Hants Water Company, plus evidence from studies on the River Avon all support higher water efficiency standards for new development. The extra costs of delivering higher standards for water efficiency will need to be considered alongside other Core Strategy policies to ensure they do not render developments unviable. Options to address this issue are set out below under **Issue 1: 'How should our sustainable construction and energy efficiency policies apply to new development?'.**

Issue identified through consultation or the evidence base

Issue: Do we need a specific policy to manage appropriate sustainable construction (renovation and repairs) to historic buildings?

Consideration of Evidence and Policy

4.16 Part L of the updated Building Regulations (2002) states that the special characteristics of a historic building must be recognised. The Dorset Energy Efficiency Strategy also includes an objective to increase the energy efficiency of historic buildings. The Strategy seeks to promote better energy efficiency in historic buildings through improvement or renovation works or extensions.

Conclusions and implications for preferred options

4.17 The Core Strategy should recognise the unique requirements of historic buildings with regard to sustainable technologies and renewable energy standards. Options to address this issue are set out below under **Issue 1: 'How should our sustainable construction and energy efficiency policies apply to new development?'.**

Issue Identified at Issues and Options

CC2 "What proportion of their energy requirements should new developments be required to provide from on-site renewable energy sources?"

Issues and options Consultation Response

Option	Agree	Disagree	No Opinion	Total
A: Require new residential developments, over a threshold size, to provide more than 10% of their energy requirements from on-site renewables	72	37	18	127
B: Require new non-residential developments, over a threshold size, to provide more than 10% of their energy requirements from on-site renewables	70	37	18	125
C: Other, please specify				29

Table 4.3

4.18 The vast majority of respondents expressed support for the incorporation of on-site renewable energy generation technologies into new development. There was a small majority support for application of renewable energy requirements to both residential (57%) and non-residential (56%) development. As with issue CC1 many respondees felt that there was insufficient local evidence to demonstrate a need for higher targets, as required by PPS1 and that local policies should adopt targets set nationally, or by the Regional Spatial Strategy. Respondents warned that policies should not prescribe technologies, should not be limited to renewable energy alone or focus on on-site generation rather than district-wide off-site, and they should include both heat and electricity generation. Generally respondents favoured a proportion of no more than 10% to maintain development viability and to ensure house prices do not significantly increase as a result, although higher phase targets over the plan period may be appropriate. Statutory consultees who supported both options A and B included Natural England, the RSPB, Dorset County Council and a number of town and parish councils.

Issues and Options Sustainability Appraisal

4.19 Both options A and B have a significant positive impact on a number of Sustainability Appraisal objectives, most notably objectives 1 (protection of habitats) and 10 (reducing flooding) due to the long term environmental benefits of carbon reduction, and objectives 4 and 11 (minimising use of minerals and non-renewable resources). The only identified negative impact was for option A under objective 13 (housing) due to concerns that increased development costs resulting from the initial installation of renewable or low carbon energy could eventually affect house prices. Studies nationally have concluded that this effect would decline in the medium to long term once this form of energy generation became the industry standard. Option B provides sustainability benefits in addition to option A (they are not mutually exclusive). Wider impacts on development viability are also a concern with both options A and B.

Consideration of evidence and policy

4.20 PPS1 and PPS22 require local authorities to adopt policies for renewable, low carbon and decentralised energy which promote their use and aim to meet Government targets. PPS1 only permits Councils to adopt more ambitious targets for renewable energy where there is clear local justification on a development area basis, not district-wide. Higher targets will be more costly to meet and the ability of development to meet higher targets will depend on viability.

4.21 The Councils have commissioned master-planning exercises for the urban extensions which will assess the potential for renewable energy installations. If this work demonstrates that a low carbon district-wide heat and/or power facility is feasible and potentially viable, the Councils could possibly expect developments to provide a higher proportion of their energy than the target of 10%. It will be possible to make clearer judgements concerning development viability following completion of the infrastructure development plan for the urban extensions completed as part of the master planning process. The preferred option should be to await the outcomes of the master planning work and propose high renewable energy targets if they are found to be viable.

Conclusions and implications for preferred options

4.22 Policies should not simply focus on on-site energy generation but should also consider decentralised off-site renewable and low carbon technologies such as district heating and power. The current evidence base does not justify more ambitious targets for renewable energy than those set out in the evidence but policy should seek to capitalise on the opportunities presented by large scale development at the urban extensions. The outcomes of ongoing master planning work and renewable energy assessment at the urban extensions should inform a policy which could potentially require developments to provide more than the basic 10% energy generation. Options to address this issue are set out below under **Issue 2: "How should our renewable, decentralised and low carbon energy policies apply to new development?"**

Issue identified at Issues and Options

CC3 "For residential developments, over what threshold should policies require a proportion of energy to be provided through on-site renewables?"

Issues and options Consultation Response

Option	Agree	Other	Total
A: 10 dwellings or more	25		25
B: 5 dwellings or more	17		17
C: No threshold (i.e. 1 dwelling)	51	4	55

D: Other, please specify			7

Table 4.4

4.23 Responses were narrowly split between those who supported a single dwelling threshold (53%) and those who supported a higher threshold of 5 or 10 dwellings (total 47%). Interestingly, more responses supported a threshold of 10 dwellings (26%) than 5 dwellings (18%), partly because the draft Regional Spatial Strategy, which was current at the time of consultation, defined 'larger scale developments' as 10 units or more. Perhaps unsurprisingly, objections to low thresholds were primarily made by the development industry who expressed serious concerns about development viability and the feasibility of providing renewable energy within small housing schemes. Many comments stressed the need for policies to be sufficiently flexible to account for the unique circumstances of each development and to capitalise on specific development opportunities.

Issues and Options Sustainability Appraisal

4.24 All options A, B and C have a significant positive impact on objectives 1 (protection of habitats), 4 and 11 (minimising use of minerals and non-renewable resources). As lower thresholds will capture more opportunities to provide renewable energy, the benefits under each of these objectives should be greater in the medium to long term (5 to 20 years). The only identified negative impact was for option A under objective 13 (housing) – *see reasoning above for issue CC2 regarding house prices in the long term* – the impact of which will be greatest for the lower threshold options B and C.

Consideration of evidence and policy

4.25 PPS1 and PPS22 state that renewable energy policies should apply to both residential and commercial development. All developments will create demand for heat and power, which suggests that perhaps very small thresholds should be used. The Councils' Strategic Housing Land Availability Assessments (SHLAA) show that apart from the urban extensions, the majority of residential developments over the Core Strategy period are likely to be less than ten dwellings in size, many less than five. The cumulative impact of small developments will therefore be considerable in terms of energy demand and carbon emissions, but developments of this size do not individually provide the economies of scale necessary to finance on-site renewable energy installations. Larger developments are more likely to be able to afford to pay for renewable energy provision but, apart from the urban extensions, represent only a small portion of new housing that will be delivered up to 2026.

4.26 Government's consultation on the Definition of Zero Carbon Homes and Non-domestic Buildings (December 2008) suggests that to meet carbon reduction targets, developments could make use of a range of 'allowable solutions'. These could include off-site, perhaps district-wide measures to offset the carbon released through small developments which cannot mitigate their own impacts on site. Several local authorities in England are considering 'carbon offset funds' which would require small developments to make a financial contribution towards off-site carbon saving measures delivered by the local authority.

Conclusions and implications for preferred options

4.27 Larger developments are likely to be of sufficient scale to be financially viable to meet the 10% renewable, decentralised or low carbon target. Small developments may not be able to provide energy generation themselves; consideration should be given to district-wide solutions and a 'carbon offset fund' where financial contributions are pooled towards district-wide energy provision or other carbon saving initiatives. The Core Strategy should seek to capitalise on the opportunities presented by large scale development at the urban extensions. Options to address this issue are set out below under **Issue 2: 'How should our renewable, decentralised and low carbon energy policies apply to new development?'.**

Issue identified at Issues and Options

CC4 "For non-residential developments, over what threshold should policies require a proportion of energy to be provided through on-site renewables?"

Issues and options Consultation Response

Option	Agree	Disagree	Total
A: 0.5ha (5000sq metres/1.2 acres)	26		26
B: 0.25ha (2.500sq metres/0.6 acres)	17	1	18
C: 0.1ha (1000sq metres/0.25 acres)	32		32

Table 4.5

4.28 This option attracted a lower response rate compared with residential development and far fewer supporting comments were given. As for option CC3, responses generally favoured a low threshold. A total of 65% agreed with a 0.1ha or 0.25ha threshold. 42% favoured the lower 0.1ha threshold. More responses supported the highest figure of 0.5ha than 0.25ha however, again because the draft RSS, current at the time of consultation, defined 'larger non-residential developments' as being of 0.5ha or greater. Of the statutory stakeholders, Dorset County Council supported option B while Natural England and the RSPB supported option C.

4.29 **Issues and Options Sustainability Appraisal**

4.30 Similar to issue CC3, all options A, B and C have a significant beneficial impact upon objectives 1 (protection of habitats), 4 and 11 (minimising use of minerals and non-renewable resources). As lower thresholds will capture more opportunities to provide renewable energy, the benefits under each of these objectives should be greater in the medium to long term (5 to 20 years). The options score negatively under objective 24 (sustainable economy) as any requirement for renewable energy will increase development costs and potentially affect viability. This impact will be greater for lower threshold options.

Consideration of evidence and policy

4.31 See discussion of evidence and policy under Issue CC3 above

Conclusions and implications for preferred options

4.32 See conclusions under Issue CC3 above.

Issue identified at Issues and Options

CC5 "Are there types of renewable energy development which would be inappropriate in parts of Christchurch and East Dorset?"

Issues and options Consultation Response

Option	Agree	Disagree	Total
A: Solar power	22		23
B: Wind turbines (small residential scale)	36		40
C: Wind turbines (large scale wind farms)	58	2	70
D: Biomass	21		24
E: Hydro power (tidal)	31	1	34
F: Other	26		28

Table 4.6

4.33 All options attracted a similar level of objection (between 22 and 36 responses each) apart from large-scale wind generation which received 58 objections. Generally, there was majority support for various renewable energy technologies, providing that they do not present a hazard to people or wildlife, do not have a negative economic impact and do not spoil valuable views such as areas of sensitive or high landscape value. It was suggested that the use of wave and tidal renewable technologies should be considered. There was a highly varied mix of objections to several options from many parish councils. Natural England and the RSPB warned that large-scale energy facilities of any kind may impact negatively on areas of landscape or nature conservation interest and protected species and that each location would need to be judged individually. The Environment Agency referred the Councils to policy in PPS25 regarding flood risk and essential infrastructure and to requirements for consents and licensing.

Issues and Options Sustainability Appraisal

4.34 All options have a significant positive impact upon objectives 1 (protection of habitats), 4 and 11 (minimising use of minerals and non-renewable resources). Options B and C (wind turbines), option D (biomass) and option E (hydro power) scored negatively for objective 6 (minimise pollution) due to noise, vibration and possible other forms of pollution. There would be a significant negative impact on objective 22 (landscape) from wind turbines. Generally, smaller-scale technologies scored most highly as they were unlikely to affect landscape, species or residents over a large area.

Consideration of evidence and policy

4.35 The supplement to PPS1states that local policies should 'avoid prescription on technologies and be flexible in how carbon savings from local energy supplies are to be secured'. The findings of the South West Renewable Energy Atlas (2006) show that large scale wind or biomass are very unlikely to be appropriate in either Christchurch or East Dorset due to landscape sensitivity (see figures 1 and 2). The large areas of protected habitats across both districts are also highly sensitive to large scale renewable or decentralised energy. Urban extension master planning will include an initial assessment of renewable energy feasibility and may give indications of appropriate technologies. The range and total sum of financial demands which will be placed on new development may mean that the Councils cannot adopt ambitious policies for renewable energy as they may render developments unviable. A full feasibility study of energy options will therefore need to wait until costs for other essential infrastructure have been determined.

4.36 A wealth of guidance and good practice published by national and regional organisations and companies such as the Centre for Sustainable Energy and Regen South West advise that district heating and power facilities, financed through pooled contributions and upfront loans, could provide renewable energy to developments and existing dwellings on a area-wide basis. Unfortunately the location of the Christchurch and East Dorset urban extensions means that cross-border heat or power supply to adjacent local authority areas is highly unlikely given the large distances to neighbouring development.

4.37 Conclusions and implications for preferred options

4.38 National policy makes it clear that local authorities should adopt policies which promote renewable, low carbon and decentralised energy within new developments but that specific technologies should not be prescribed. Policy should consider where renewable energy may present a hazard to people or wildlife, have a negative economic impact or spoil valuable views such in areas of sensitive or high landscape value. District heat and power facilities could meet the needs of large and small developments, and existing dwellings. Options to address this issue are set out below under **Issue 2: 'How should our renewable, decentralised and low carbon energy policies apply to new development?'.**

Issue identified through consultation

Issue "New requirements for sustainable construction and renewable energy must not compromise development viability."

Consideration of evidence and policy

4.39 Understanding development viability will be critical to successful delivery of Core Strategy policies. Following the completion of the Core Strategy infrastructure development plan it will be possible to assess the impact of requirements for infrastructure provision and other policies upon development viability.

Conclusions and implications for preferred options

4.40 Assessments of development viability are required following completion of the Core Strategy infrastructure development plan and a contributions tariff schedule to determine the standards that can be applied in the Core Strategy toward sustainable construction and renewable energy. Options to address this issue are set out below under **Issue 2: 'How should our renewable, decentralised and low carbon energy policies apply to new development?'.**

Issue identified through consultation

Issue: "How can our policies make best use of the opportunity for larger-scale energy production provided by the urban extensions and other large developments?'

4.41 *This issue has already been addressed as part of the discussion on issue CC1 (above) and options proposed under Key Issue 1.*

Issue Identified at Issues and Options

CC6 "Should we continue to permit new development in areas of flood risk?"

Issues and options Consultation response

Option	Agree	Disagree	No opinion	Other	Total
A: Yes, if flood risk assessments prove flood risk will not increase as a result	32	82	6	1	121
B: Yes, but only if housing or commercial needs cannot be met elsewhere	16	87	6		108
C: No, direct all new development away from areas of flood risk	106	21	10	6	143
D: Other. Please specify					25

Table 4.7

4.42 Responses indicated that consultees supported option C (74%) or other policies which heavily restrict development within flood plains in line with PPS25. Comments suggested it would irresponsible for the Councils to build in flood plains since the severity of the 2007 floods and the obvious threat to home insurance. Others recognised that developable land - in Christchurch especially – is scarce and that to make best use of land and avoid town cramming, solutions to flood risk need to be found so that developments may take place in flood plains where risk can be mitigated. The Environment Agency referred the Council to advice contained within PPS25, in particular the Sequential and Exception tests, and the findings of each Council's Strategic Flood Risk Assessment. Natural England supported option A and the RSPB suggested a similar solution where flood risk should not increase overall in the long term as a result of development. Dorset County Council favoured option C.

Issues and options Sustainability Appraisal

4.43 Options A and B score positively under objective 1 (protect habitats) and option C negatively. This identifies that directing development away from flood zones (option C) will place greater pressure for development of greenfield sites which may affect biodiversity. This will be especially evident in Christchurch in the long term once sites in the urban area become scarcer and future options for new urban extensions are required. Under objective 2 (wise use of land) options A and B score negatively in recognition that developing in flood zones is not sustainable. Option C scores most positively for objective 10 (flooding) as it would ensure no increase in risk to development occurs, while option B is the least sustainable because of the increased risk it would create. In summary, option C is assessed most favourably.

Consideration of Evidence and Policy

4.44 PPS25 gives clear and definite guidance on the scope and content of local planning policies. Development must be directed towards areas of lowest risk and Core Strategy policies must be informed by the Strategic Flood Risk Assessments. Developments must be safe throughout their lifetime and the effects of climate change must be taken into account. Development must therefore be guided by flood risk as it is predicted to be in the future; 60 years for commercial developments and 100 years for residential. The Strategic Flood Risk Assessments provide two time horizons for this purpose.

4.45 The Strategic Housing Land Availability Assessments identify sufficient land within flood zone 1 to accommodate the level of housing proposed by the former draft RSS within the urban areas and the then urban extensions. This means the PPS25 Sequential Test is not passed for allocations or applications for windfall development in Flood Zones 2 and 3 because the sites identified by the Strategic Housing Land Availability Assessment must be considered to be reasonably available alternatives for housing development outside of flood zones. PPS25 includes an Exception Test which should only be applied after the Sequential Test has been passed. Part a) of the Exception Test allows applications for development to be considered where their benefits would outweigh flood risk. It will be for applicants and the Councils to clarify these benefits.

4.46 The Strategic Flood Risk Assessments and Employment Land Review do not suggest any substantial problems with regard to flood risk and employment sites, other than the North West Sector at Bournemouth Airport.

Conclusions and implications for preferred options

4.47 To be in conformity with PPS25, policies will direct development away from areas at risk of flooding and will support application of the Sequential and Exception Tests. Flood policy will primarily affect Christchurch as East Dorset's potential strategic allocation sites are not significantly affected by flood risk. The complex range of issues that result from the Strategic Flood Risk Assessments will require detailed policies within the Local Development Framework to ensure development takes place in safe and suitable locations, while making the best use of scarce developable land. Not all of these policies will be appropriate for the Core Strategy however and Christchurch will need to consider a Supplementary Planning Document to provide local clarity on a number of issues such as appropriate design and flood mitigation measures.

4.48 Options to address this issue are set out below under **Issue 3: 'How should our policies direct development away from flood risk areas while also making best use of limited development land?'**

Issue Identified at Issues and Options

Issue CC7: "To reduce damage to buildings and risk to life, should we require new developments in the flood plain to incorporate flood resistant and/or resilient measures into their design, on the basis that flood prevention measures will provide protection?"

Issues and options Consultation response

Option	Agree	Disagree	No opinion	Other	Total
A: Yes require this of all developments in areas of flood risk	50	11	4		65
B: Yes, but only for specific identified locations or development types	15	21	6		42
C: No, do not require this	11	23	5		39
D: Other, please specify					44

Table 4.8

4.49 A clear majority (66%) of responses favoured a policy which required flood mitigation measures be required of all developments affected by flood risk, although most suggested that no development should take place in flood risk areas in the first place. Developers suggested that innovative design solutions could not only make developments safe but also more attractive. The Environment Agency supported a policy along the lines of option A which was informed by the results of the Strategic Flood Risk Assessments. Natural England and the RSPB also supported option A.

Consideration of evidence and policy

4.50 PPS25 and the Strategic Flood Risk Assessments make direct recommendations that development within flood zones should be flood resistant (to keep water out) and resilient (to recover quickly if flood waters entered) and the central Government publication '*Flood Resilient Construction: Improving the Flood Performance of New Buildings*' (DCLG, 2007) provides specific guidance for this purpose.

4.51 PPS25 and the Strategic Flood Risk Assessments also recommend that all developments (including those in Flood Zone 1) incorporate Sustainable Urban Drainage Systems (SUDS) to manage surface water runoff and ensure that post-development levels are no higher than they were prior to development. Wherever possible, flood risk should decrease overall as a result of these measures. Consultation on the emerging Flood and Water Management Bill recognises the benefit of SUDS and has considered the possibility of their mandatory application.

4.52 Government circular 05/05 required that any planning obligation sought for infrastructure must be both 'necessary to make the proposed development acceptable in planning terms' and 'directly related to the proposed development'. Under those regulations therefore, contributions towards flood defences could therefore only be sought from development either actually within flood zones or somehow directly affected by the potential for future flooding. However,

the Community Infrastructure Levy now in place offers more flexibility, allowing local authorities to produce a schedule of necessary infrastructure towards which all development contributes its share. Flood defences are a very expensive form of infrastructure however and the level of development in Christchurch and East Dorset is unlikely to be able to contribute the full cost of future improvements. National funding administered through the Environment Agency will therefore also be required.

4.53 PPS25 confirms that developers cannot call on public resources to provide defences and other measures for their proposed development where they are not already programmed for the protection of existing development. However for some previously developed land, public investment in land remediation and infrastructure may include an element of flood defence and mitigation investment as a means of bringing such land into beneficial use.

Issues and options Sustainability Appraisal

4.54 Options A and B both have positive impacts upon objectives 10 (flooding) and 20 (spaces and places) as both would reduce the risk to buildings and improve their resilience to flood damage. Option C would not result in these benefits. Taking Sustainable Drainage Systems into account, option A should fact score more positively than option B, although the consultation question did not specify sustainable drainage systems as a measure. Options A and B both have the potential to increase development costs and identified as negative impacts under objective 13 (affordable housing). This is only likely to be a concern in the short term however as construction practices would 'catch up' in the longer term.

Conclusions and implications for preferred options

4.55 Policies should be informed by the direct recommendations of the Strategic Flood Risk Assessments and require that new developments incorporate flood resistance and resilience measures and incorporate Sustainable Drainage Systems. Flood defences should be included on the Councils' schedules of necessary infrastructure for charging under the contributions tariff system.

4.56 Options to address this issue are set out below under **Issue 3: 'How should our policies direct development away from flood risk areas while also making best use of limited development land?'**

Issue asked at Issues and Options

Issue CC8 "How should we consider development in areas at risk from coastal erosion?"

Issues and options Consultation response

Option	Agree	Disagree	No opinion	Other	Total
A: We should resist any new development in coastal areas at risk of erosion	79	12	10		101
B: We should resist development in coastal areas where it would not be viable to resist coastal erosion	64	7	8		79

C: Development should be allowed in coastal areas at risk from erosion provided it contributes to the cost of safeguarding works	15	45	11		71
D: Risk of coastal erosion should not be used to resist new development in coastal areas	6	52	9	1	68
E: Other, please specify	11				11

Table 4.9

4.57 A clear majority considered that development should be directed away from areas at risk of erosion. 78% of responses to option A supported a policy resisting development in any area at risk of coastal erosion. Some responses considered that resisting coastal erosion would be so expensive, developments would be unlikely to bear the costs. Attempts to reduce coastal erosion could potentially move problems further along the coast.

Consideration of evidence and policy

4.58 Naturally, the issue of coastal erosion only affects Christchurch.

4.59 The PPS25 supplement: 'Development and Coastal Change' seeks to prevent new development from being put at risk from coastal change by avoiding inappropriate development in these areas and also directing development away from these areas. The saved paragraphs of PPG 20 (2.9 and 2.10) direct housing and employment development away from the coastal zone.

4.60 The PPS25 supplement states that local planning authorities are required to identify areas likely to be affected by physical changes to the coast and refer to this as the Coastal Change Management Area (CCMA), Authorities are also required to identify the type of development that will be appropriate in these areas. The CCMA should be identified where appropriate from the risk appraisal undertaken through the production of the Shoreline Management Plan and subsequently identified on the Local Development Framework Proposals Map. The Poole and Christchurch Bays Shoreline Management Plan 2 is currently being produced and overall seeks to maintain existing defences involving an approach of managed realignment at Mudeford Spit and Hengistbury Head East. Therefore in accordance with the PPS25 supplement it is not currently necessary to identify a Coastal Change Management Area for Christchurch.

4.61 Additionally, development in low lying coastal areas is already highly constrained by flood risk policy and it is highly unlikely that vulnerable development could be permitted in areas both at risk of flooding and coastal erosion. The Strategic Housing Land Availability Assessment identifies a small amount of housing potential within 100m of the coast and no major employment locations are affected. PPS25 informed by the Christchurch Strategic Flood Risk Assessment will inform decisions concerning the suitability of development in areas of the Borough affected by tidal and fluvial floodrisk.

Issues and options Sustainability Appraisal

4.62 Options A and B have direct benefits under objectives 2 (wise use of land), 10 (flooding) and 22 (enhance landscape). However, option A is most similar to the current approach within PPG20 but would effectively sterilise land along the coast from development and could therefore result in a negative impact under objective 2. Option B provides the most flexible and objective option, while option C is the least sustainable given the large expense of providing protection works.

Conclusions and implications for preferred options

4.63 In accordance with the PPS25 supplement 'Development and Coastal Change' it is not necessary to identify a Coastal Change Management Area in Christchurch as the draft Poole and Christchurch Bays Shoreline Management Plan (2009) is, overall, adopting a policy of 'holding the line' which includes an approach of managed realignment for Mudeford Spit and Hengistbury Head East and results in no significant change to the shoreline during the 100 year period covered by SMP2. In this instance the PPS25 supplement and PPG20 are sufficient to inform decisions on development proposals in the coastal zone. Additionally, PPS25 informed by the Christchurch Strategic Flood Risk Assessment is sufficient to inform decisions concerning the suitability of development in areas of the Borough affected by floodrisk when considering the impact of tidal and fluvial floodrisk to 2126 and the impact of climate change.

4.64 Preferred options for this issue are set out under **Issue 4 'How should we consider development in areas at risk from coastal erosion?'**

Issue identified through evidence and consultation

New Issue "How will the Core Strategy deliver climate mitigation and adaptation measures?"

Consideration of evidence and policy

4.65 The climate change supplement to PPS1 makes a distinction between climate change 'mitigation' and 'adaptation'. Mitigation measures are those which reduce factors contributing to climate change (primarily by lowering carbon emissions) or prevent risks to new development (such as flood attenuation). Adaptation measures are aimed at reducing future vulnerability to the inevitable effects of climate change; they may enable better compatibility with changing conditions such as summer temperatures or rising sea levels, faster recovery from events such as floods, and should recognise opportunities to benefit from the effects of a changing climate. Mitigation and adaptation should not be considered separately and new development should be planned with both in mind.

Climate change mitigation

4.66 In Dorset, Bournemouth and Poole the *Renewable Energy Strategy (2005)*, the *Energy Efficiency Strategy (2009)* and the *Local Transport Plan (2006-11)* comprise the Dorset Carbon Reduction Framework, where renewable and low carbon energy, sustainable development and energy efficiency are addressed under the umbrella objective of 'carbon reduction'. Key Issues 1 and 2 of this paper - and the associated preferred options - are specifically targeted at assisting with the delivery of these strategies and achieving high levels of carbon reduction in Christchurch and East Dorset, thereby reducing the effects of climate change. Key Issues 3 and 4 provide mitigation options with respect to flooding and coastal erosion and have heavily influenced the

housing and employment strategies for the Core Strategy. Development options proposed through the Housing, Economy and Settlement Strategy Key Issues Papers incorporate results from the Strategic Flood Risk Assessments and Strategic Housing Land Availability Assessments which direct future development away from areas at risk of flooding. The Transport Key Issues paper promotes alternative forms of transport to the car and the Open Space, Recreation and Green Infrastructure paper proposes a network sites and routes to promote walking and cycling.

Climate change adaptation

4.67 The Core Strategy should also ensure that new development – and where possible existing development – becomes better suited to the effects of climate change over time, particularly in areas where significant change may occur. Measures proposed through Key Issues 1 to 4 include water efficiency measures (to adapt to lower river flows), sustainable drainage systems (to adapt to increased rainfall) and flood resilience measures incorporated into new development (to allow quicker recovery from flooding). The Open Space, Recreation and Green Infrastructure Key Issue Paper proposes options for green infrastructure which provide green areas to help biodiversity cope with changes to habitats and to increase water absorption, and the Natural Environment Key Issue Paper aims to protect and enhance habitats, within the context of climate change.

4.68 Current predictions for warmer, wetter winters; hotter, drier summers; more frequent and intense rainfall, sea level rise and storm surges suggest that design policies should consider the effect of weather on building materials and also on the layout and function of individual developments and communities. As a result, policies may need to include measure to "future proof" infrastructure and to minimise their vulnerability, improve their compatibility and resilience to new conditions, and to cope with future demands where development and infrastructure will be susceptible to conditions created by climate change.

Conclusions and implications for preferred options

4.69 Climate change considerations should inform all areas of the Core Strategy; mitigation and adaption should run as cross-cutting themes throughout the LDF. To compliment the specific policies proposed elsewhere through this paper to mitigate and adapt to climate change, general principles and good practice relating to climate change and carbon reduction should appear within other policies, possibly as design or development assessment criteria.

Issue 5: How will the Core Strategy deliver climate mitigation and adaptation measures?

No local policy option required: climate change mitigation and adaptation as cross-cutting themes

4.70 In addition to the proposed policies for sustainable development, energy and water efficiency, renewable and low carbon energy, flood risk and coastal erosion, the Core Strategy will recognise the need to mitigate and adapt to climate change within all relevant policy areas. Where appropriate, criteria will be included within policies to:

- Minimise the vulnerability of new development by locating it away from areas of highest risk
- Incorporate design measures within new development – and where possible, existing development - which ensure resilience to the consequences of more extreme weather and climatic conditions (link to Design and Landscape policies)
- Minimise carbon emissions through all forms of development (link to Transport and Bournemouth Airport policies)

- Ensure that LDF policies complement each other with regard to climate change and do not unnecessarily restrict or inhibit the delivery of mitigation and adaptation measures or low carbon development
- Recognise the sensitivity of ecosystems to climate change and plan for the protection and enhancement of biodiversity (link to policies for the natural environment)

4.71 This option does not propose a standalone policy within the Core Strategy. The cross-cutting approach proposed will influence all sections of the Core Strategy to ensure that all relevant policies take account of the need to mitigate and adapt to climate change.

4.72 **Alternative options:** none proposed

Preferred Options

4.73 **The following Options are found in the Managing the Natural Environment chapter of the Core Strategy.**

4.74 *Note: the following options are not mutually exclusive and could all form a set of policy measures.*

Issue 1: How should our sustainable construction and energy efficiency policies apply to new development?

Preferred option ME7: Sustainable development standards for new homes and extension or refurbishment of existing homes

4.75 **Other than water efficiency, the Core Strategy will not require new housing to meet higher standards of the Code for Sustainable Homes beyond the programme required nationally (as set out in the national policy statement 'Building a Greener Future'). Developments will however be required to incorporate carbon reduction, water and energy efficiency measures and to demonstrate they have explored a range of sustainable and low carbon options. The Councils will encourage and favourably consider innovatively designed schemes which achieve high levels of carbon reduction, where they meet with other planning requirements. This approach will also apply to development involving the extension or refurbishment of existing homes (where planning permission is required). Decisions regarding the most appropriate range and type of measures to be considered for each development should be informed by the Code for Sustainable Homes design categories, but are most likely to include:**

- **Water and energy efficiency**
- **Orientation and solar gain (natural lighting and heating)**
- **Use of renewable and low impact materials**
- **Minimising waste, pollution and water run-off**

4.76 **The Core Strategy will adopt targets 2a and 2b of the Bournemouth, Dorset & Poole Energy Efficiency Strategy (2009) relating to existing homes:**

- **"to achieve an average SAP (Standard Assessment Procedure) rating of 65-70 in the housing stock by 2016" and,**
- **"to ensure that there will be no dwelling with a SAP rating of less than 35 by 2016".**

4.77 New residential developments (i.e. additional and replacement dwellings) throughout existing settlements and the urban extensions will be required to incorporate water efficiency measures to achieve a maximum consumption rate of 105 litres per person per day, thereby meeting level 3 of the 'water' component of the 'Code for Sustainable Homes' (unless, having regard to the type of development involved, its design and location, this is not feasible or viable). This figure will be subject to viability testing following completion of the Core Strategy infrastructure development plan and may need to be revised accordingly.

4.78 Ground water sources will be afforded protection through a criteria-based policy for new development which refers to the Environment Agency's Ground Water Source Protection Zones which if appropriate, will be shown on the Core Strategy proposals map. The criteria will assess:

- **the type of development and its likely impact on ground water in terms of contaminants from construction and from use**
- **the need for development affecting a Ground Water Source Protection Zone**
- **proximity to the Ground Water Source Protection Zone**
- **the sensitivity of underground aquifers**

4.79 Developments involving the conversion or alteration of historic buildings will be expected to demonstrate that they have explored a range of sustainable and low carbon options for construction and energy use and incorporated them into the design where practically possible, provided that this does not harm the character of the building or increase the risk of long-term deterioration to fabric or fittings.

Preferred option ME8: Sustainable development standards for non-residential developments.

4.80 Non-residential development throughout existing settlements and the urban extensions will be required to incorporate carbon reduction, water and energy efficiency measures and to demonstrate they have explored a range of sustainable and low carbon options. It is not appropriate to make reference to any particular assessment standard or method until the emerging national policy for non-domestic buildings is adopted.

Alternative option ME9: no local policies for sustainable construction, water or energy efficiency.

4.81 For housing, elements of the Code for Sustainable Homes would become mandatory in line with the national programme set out in Building a Greener Future but there would be no additional local policy requirements to incorporate carbon reduction, water or energy efficiency measures. Commercial development and historic buildings would be unaffected by local policies.

Issue 2: For residential development, over what threshold should policies require a proportion of energy to be provided through on-site renewables?

Issue 3: For non-residential development, over what threshold should policies require a proportion of energy to be provided through on-site renewables?

4.82 *Note: the following options are not mutually exclusive and could all form a set of policy measures.*

Preferred Option ME10 Renewable energy standards for residential and non-residential developments

4.83 At least 10% of the total energy used in new development of more than 10 dwellings (or 0.5ha) or 1,000m^2 of non-residential floorspace (or if the site is 1ha or larger) will come from decentralised, renewable or low carbon sources (unless, having regard to the type of development involved and its location and design, this is not feasible or viable).

4.84 The Councils will investigate options for district heating and/or power facilities. Developments may be required to connect to such a facility where appropriate, feasible and viable.

Preferred option ME11 Renewable energy standards for residential and non-residential development within larger developments and within the urban extensions

4.85 Larger developments within existing settlements (10 dwellings or 0.5ha residential land area, or 1,000m2 of non-residential floorspace or 1ha or larger) and all development within the new neighbourhoods will be expected to achieve above the minimum 10% target for energy from decentralised, renewable or low carbon sources. This option can only be adopted, however, if the findings of the ongoing master planning of the new neighbourhoods and viability work demonstrate that clear opportunities exist to provide a higher proportion of energy from decentralised, renewable or low carbon sources, and are shown to be feasible and viable. No specific target can yet be proposed, because evidence is not yet available to inform what higher target would be most appropriate within the bounds of development viability and geographic constraints in order to satisfy paragraph 33 of the Supplement to PPS1. The Councils must await completion of the master planning assessment to allow an informed decision on a viable renewable energy option to be taken following Preferred Options consultation.

4.86 To prevent a piecemeal approach, the preferred option would consider each urban extension as one 'larger development' and would, therefore, require that ALL schemes within the extensions meet the higher target (unless, having regard to the type of development involved and its location and design, this is not feasible or viable). It is anticipated that this would require district-wide energy generation such as a combined heat and power plant. To meet the higher targets, energy provision could either be provided on-site or through commuted sums to the Council which would then finance a large off-site facility. To maximise this potential, the Councils will investigate opportunities to connect such a scheme to existing development adjacent to the new neighbourhoods.

4.87 If the evidence base does not justify a higher target, non-residential development within larger developments and within the new neighbourhoods will be required to meet the 10% target.

Preferred option ME12: financial contribution for small or exempt developments (carbon offset fund)

4.88 Where developments cannot feasibly or viably provide the required proportion of their total energy requirements from decentralised, renewable or low carbon energy sources as part of the development, the Core Strategy will require a financial contribution towards off-site carbon reduction measures. These measures, such as district-wide heating facilities or domestic micro-generation, improvements to the energy efficiency of existing buildings or even planting and habitat creation, will mitigate the carbon released from the new development. This approach

would operate along the lines of a 'carbon offset fund' which has been successfully implemented by councils elsewhere. Contributions would be pooled and used to fund an area-wide decentralised, renewable or low carbon energy source elsewhere in the district (or other carbon saving measure) thereby offsetting the carbon emissions from the contributing developments.

Preferred option ME13: energy-generating technologies

4.89 Future policies will not prescribe which type of renewable technology to incorporate into developments. The suitability of the chosen technologies should be judged on a site specific basis and developers will be expected to assess a range of suitable options including district-wide and/or microgeneration. Where specific opportunities exist, such as at the urban extensions, the development of Combined Heat and Power networks (or other district-wide/community heating and power) will be favoured. As part on the urban extension master planning, the Councils will carry out a feasibility assessment to identify which technologies and locations are most appropriate and how they may be financed through new development and other funding sources. As the urban extensions provide the best opportunity to deliver carbon-reducing measures which would not be feasible elsewhere in the urban areas due to the small-scale of individual developments, they will be the focus of feasibility studies and possible developer contributions policies.

Issue 4: Should we continue to permit new development in areas of flood risk?

4.90 *Note: the following options are not mutually exclusive and could all form a complete set of policy measures.*

Preferred option ME14: development within areas at risk of flooding

4.91 PPS25 is considered adequate, when adapted and clarified by the Strategic Flood Risk Assessments to suit local circumstances, to inform decisions regarding the suitability of all forms of development within flood zones and no local policy is therefore required. Only where applications or proposed sites for allocation satisfy the requirements of PPS25 will development be permitted. Providing safe unaided egress from the development to ground beyond the flood risk area shall be a requirement of all development which intensifies use. The Core Strategy will define the extent of each flood zone and the Councils will provide whatever additional information is available through the Strategic Flood Risk Assessments to inform applications. In their determination of planning applications, the Councils will make reference to all available information on flood risk from all sources of flooding at the time of application and will consult with the Environment Agency. This option will not form a standalone policy.

4.92 Christchurch Council will prepare a Supplementary Planning Document on the topic of flood risk to provide guidance for developers on how to deliver Core Strategy policies, interpret and use the Strategic Flood Risk Assessment flood maps to determine the site level degree of risk, and advice on how to apply the Sequential and Exception tests locally.

Preferred option ME15: flood mitigation measures

4.93 Local policy will support the PPS25 requirement that all developments (in all flood zones and including the urban extensions) will be required to demonstrate that flood risk does not increase as a result and that options have been sought to reduce flood risk overall. Post-development surface water run off must not exceed pre-development levels and options should have been sought to reduce levels of run off overall. The primary means of satisfying this policy will be through the use of Sustainable Drainage Systems and a range of flood resistance and resilience measures. Space for such measures should be set aside within larger developments.

4.94 All developments (including redevelopments and extensions which require planning permission) within areas at risk of flooding will be required to incorporate appropriate flood resistance and resilience measures as a means of 'future proofing' against the effects of climate change. Historic buildings and sites may be exempt from this option where measures would harm their character or increase the risk of long-term deterioration to fabric or fittings.

4.95 Details of the most appropriate types and layouts for Sustainable Drainage Systems and the most appropriate resistance and resilience measures will be provided by the forthcoming Flood and Water Management Bill, the existing East Dorset Supplementary Planning Document on Sustainable Drainage Systems, the proposed Christchurch Supplementary Planning Document on Flood Risk and other local evidence (including the Strategic Flood Risk Assessments) available at the time of application.

Preferred option ME 16: flood management strategies and funding flood defence improvements

4.96 For developments within a flood risk area which pass the PPS25 Sequential Test but where risk can not be adequately mitigated on site, a flood management strategy and delivery plan will be required prior to the grant of consent. The strategy will identify the measures required to reduce flood risk and surface water run off at the site for the duration of its design life, making it safe (including unaided access/egress during times of flood) and ensuring that flood risk does not increase elsewhere as a result. The delivery plan will identify the level and source of funding required for such measures and set out a realistic and achievable timetable for implementation. For very large schemes, area-wide flood attenuation measures may be required.

4.97 Flood defences will be identified on the Councils' schedules of essential infrastructure and development will be charged under a tariff based developer contributions scheme. Where development is of a sufficient scale to fund flood alleviation works to make that development safe throughout its design life, works in kind will be considered where appropriate.

Alternative Preferred Option ME17: flood management strategies and funding flood defence improvements

4.98 If future government guidance does not support a tariff based approach, section 106 planning obligations conforming to Circular 05/05 will be used instead. will instead be used. Due to the limitations imposed by Circular 05/05, developer contributions towards improvements to strategic flood defence infrastructure such as major river and coastal defences would not be required on an area-wide basis. Throughout the Core Strategy period and beyond, there will be insufficient quantity of development within flood zones to make a worthwhile contribution towards

expensive strategic flood defences which could protect large areas in the long term. However, where development is of a sufficient scale to fund improvements to major defences to make that development safe throughout its design life, financial contributions or works in kind would be considered where appropriate.

4.99 How should we consider development in areas at risk from coastal erosion?

Preferred Option ME18: development within areas at risk of coastal erosion

4.100 The supplement to Planning Policy Statement 25 'Development and Coastal Change' identifies that where the policy approach of the shoreline management plan is to hold the line for the whole period covered by the Plan (100 years) it will not be necessary to identify a Coastal Change Management Area and associated development management policies. Coastal Change Management Areas are defined as areas likely to be affected by physical changes to the coast. The overall approach of maintaining defences as identified in the draft Shoreline Management Plan 2 does not require the identification of Coastal Change Management Areas in Christchurch.

4.101 The Christchurch Strategic Flood Risk Assessment Level 2 identifies areas of the Borough affected by increased floodrisk from tidal and fluvial flooding to 2126 taking into account the effects of climate change. PPS25 informed by the Christchurch Strategic Flood Risk Assessment will inform decisions about the suitability of development in areas affected by increased floodrisk.

5 Implementation

5.1 This implementation section highlights infrastructure requirements related to the implementation of the Core Strategy approach to climate change and sustainable development. This sets out items of infrastructure combined with the projected timing for their delivery, potential sources of funding and the bodies responsible for ensuring delivery. The implementation of the strategy will involve partnership working with other key stakeholders and delivery through other plans and strategies as part of a spatial approach. The infrastructure plan set out here will inform the production of the local development framework infrastructure development plan and the preparation of a development contributions policy.

	Infrastructure	Timing	Potential Funding Sources	Responsibility	Delivery Documents
Renewable, decentralised and low carbon energy	District renewable electricity and/or heat facilities	Medium to long term (2014-26)	Developer contributions / Community Infrastructure Levy, Regional Infrastructure Fund / Regional Improvement and Efficiency Partnership (RIEP)	Local Authority	Core Strategy
Water supply & treatment	New water supply pipes and sewerage and improvements to existing	Short to medium term – as urban extensions commence (2014-16)	Bournemouth & West Hants Water (supply) and Wessex Water (sewerage and treatment)	Bournemouth & West Hants Water / Wessex Water	Bournemouth & West Hants Water / Wessex Water
Strategic Flood defences	Progressive improvements to existing river defences	Long term – potentially not required within Core Strategy period	Developer contributions / Community Infrastructure Levy, Environment Agency, Defra	Environment Agency	Christchurch Borough Flood Management Strategy (proposed)
Site-specific Flood Alleviation	Small-scale defences and flood resistance and resilience measures	In step with development in flood zones.	Incorporated into development costs	Developers and local authority	Christchurch Borough Flood Management Strategy (proposed) and planning applications

Climate change adaptation	Green Infrastructure	Short to long term - throughout Core Strategy period	Developer contributions (open spaces) / Community Infrastructure Levy	Local authority	Core Strategy, Green Infrastructure Strategy

Table 5.1