Core Strategy Background Paper

No. 8

Climate Change and Sustainable Development

(Revised January 2011)

SELBY DISTRICT COUNCIL
Moving forward with purpose

LDF LOCAL DEVELOPMENT FRAMEWORK

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Contents

1. Introduction

1.1 There is an overwhelming body of scientific evidence that indicates that climate change[1] is a serious and urgent issue. And whilst there are some remaining uncertainties about eventual impacts, the evidence is now sufficient that there is clear and strong guidance to policy makers about the pressing need for action.

1.2 Government legislation and regulation requires Local Authorities to include policies on climate change as well as promoting the delivery of low carbon, decentralised and renewable energy[2] in their development plans.

1.3 Many of the measures to cut carbon emissions also contribute to creating a healthy diversity of energy supply and addressing fuel poverty[3] through lower bills for householders. Therefore, regardless of the arguments surrounding climate change, it is prudent to ensure longer term access to energy supplies to meet residents and employers' future needs. Concerns about security of supplies can be mitigated by reducing reliance on fossil fuels and widening the range of sources from which energy and heating need can be met.

1.4 As well as ensuring a diverse range of sources of supply for energy security purposes, this also gives the opportunity to provide energy at affordable costs. The national 'Fuel Poverty Strategy' targets the three main factors that influence fuel poverty – household energy efficiency, fuel prices and household income. Core Strategies can seek to influence one of these strands - improving energy efficiency.

1.5 With the publication of the consultation on the Energy Bill 2011 and proposals for the Reform of the Electricity Market (both in December 2010), the Coalition Government has confirmed its commitment to tackling barriers to investment in energy efficiency; enhancing energy security; and enabling investment in low carbon energy supplies in order to meet climate change and energy security objectives. The Government wants to ensure that the UK undergoes a low-carbon electricity revolution at the lowest possible cost to consumers – to 'get off the fossil fuel hook and onto clean, green electricity'[4].

1.6 At the same time, the planning system can address the causes and potential impacts of climate change by promoting policies which reduce energy use, promote energy efficiency, reduce emissions (including CO_2), and promote renewable and low carbon energy use. These objectives may also be achieved by influencing the location and design of development and promoting sustainable and inclusive patterns of urban and rural development.

1.7 Reduction of carbon dioxide emissions is one of the main elements of the

[1] Climate change represents a change in long-term weather patterns. These can become warmer or colder. Annual amounts of rainfall or snowfall can increase or decrease. When scientists talk about the issue of climate change, their concern is about global warming caused by human activities.
[2] See footnote at Page 5 for definitions
[3] Fuel poverty results from a combination of unaffordable energy costs, low household income and inadequate thermal insulation and inefficient and uneconomic heating systems.
[4] Source: http://www.decc.gov.uk/

climate change agenda, but preparing for the effects of climate change is just as important. Climate change is likely to have a range of impacts including higher summer temperatures and increased risk of flooding and droughts. The key message is that new developments should be low-carbon development and well adapted to the impacts of climate change.

1.8 This Background Paper seeks to establish the justification and evidence for the climate change, sustainable development and renewable energy policies proposed, by:

- Identifying what the climate change issues are for Selby District;
- Establishing the policy background; and
- Incorporating the views of local people and other stakeholders gathered from consultations already undertaken.

2. International and National Context

2.1 Vast amounts of the UK's energy policy are touched by legislation or policy initiatives agreed with other countries in the European Union (EU). For example:

- The functioning of the EU's, and therefore UK's, internal gas and electricity markets
- Renewable energy targets (electricity, biofuels, heat) – which will play a part in achieving the EU's overall 20% target for renewable energy in the energy mix, and the UK's national target of 15%
- Energy efficiency targets, standards and labelling

2.2 In order to achieve the 'de-carbonising of the EU', it has agreed the following greenhouse gas (GHG) emissions targets:

- A 20% reduction in GHG emissions (on 1990 levels) by 2020. There is a commitment to increase this to 30% as part of a global and comprehensive agreement for the period beyond 2012, provided that other developed countries commit themselves to comparable emission reductions and that developing countries contribute adequately according to their responsibilities and respective capabilities.
- The EU's objective is to reduce GHG emission by 80-95% by 2050 in the context of action by developed countries as a group, as agreed at Environment Council in October 2009.

2.3 Meeting the EU targets for 2050 will require significant changes to every aspect of the EU's economy since a 'business as usual' approach will not deliver the required emissions reductions. In addition, how the EU moves to a low carbon economy is closely linked with energy security, EU competitiveness and jobs and growth. The key changes to the EU's economy

are almost certain to include:

- Reducing carbon emissions from electricity generation to near zero
- Greater interconnection of transmission networks to allow peaks in renewables generation in one part of Europe to compensate for troughs in renewables generation elsewhere.
- Electrification of transport i.e. replacing petrol and diesel fuelled vehicles with vehicles powered by electricity
- Reducing carbon emissions from heat generation
- 'Smarter' EU electricity transmission and distribution networks. This will be key to managing more intermittent and distributed renewable generation; improving efficiency; influencing consumer behaviour; and facilitating a widespread roll out of electric vehicles and electrical heating technologies
- The transition to a low carbon economy will also require investment, particularly in electricity transmission and distribution infrastructure.

2.4 The need for action to offset climate change is firmly embedded in national planning policy. Appendix 1 provides a summary of the main national policy drivers, which establish the scope of what Local Planning Authorities should include within their development plans as well as other sources of information that provide the evidence base for planning policies.

2.5 Amongst other national guidance, PPS22 (Renewable Energy) and its Companion Guide, as well as PPS1 (Delivering Sustainable Development) and the PPS1 Climate Change Supplement establish the requirement to address causes and potential impacts of climate change; reduce energy use; promote water efficiency; reduce emissions, promote renewable energy use and increase development of renewable energy.

2.6 The 2009 UK Renewable Energy Strategy and The UK Low Carbon Transition Plan 2009 are explicit that the planning system must support: carbon reduction; actions to combat climate change; and deployment of renewable energy.

2.7 More recently, the publication in December 2010 of both the Energy Bill 2011 and Electricity Market Reform Consultation Document, confirm the Coalition Government's commitment to climate change and energy security objectives.

2.8 Fossil fuels play a vital role in providing energy in the UK and globally. In the UK, DECC[5] wants to be able to maintain fossil fuels as part of a diverse and secure low-carbon energy mix. However, to avoid dangerous climate change, action is needed to substantially reduce the carbon dioxide emissions for these sources. Development and deployment of Carbon Capture and Storage (CCS) has the potential to reduce the CO_2 emissions from power stations by around 90%, and make a significant contribution towards the UK and international climate change goals. The Government is also promoting

[5] http://www.decc.gov.uk/en/content/cms/what_we_do/uk_supply/energy_mix/ccs/ccs.aspx

Carbon Capture and Storage (CCS) infrastructure and expertise, in key areas, such as Yorkshire and Humber with its existing coal fired power stations.

2.9 Whilst building standards for insulation and efficiency are not directly within the remit of the planning system[6], national guidance promotes policies encouraging the need to utilise energy efficient designs for aspects including layout (for example through buildings orientation and utilising passive solar energy) and sustainable construction techniques.

2.10 All new homes must be zero carbon[7] from 2016 (PPS1 Supplement on Climate Change (2007) seeks to support the achievement of zero carbon homes through the planning system) and has ambitions that all new non-domestic buildings should be zero carbon from 2019. It is gradually introducing mandatory and more demanding requirements for new homes to meet the Code for Sustainable Homes[8] standards and is encouraging the development of standards such as BREEAM[9] ratings for commercial buildings.

2.11 The England Biodiversity Strategy[10] seeks to ensure biodiversity considerations become embedded in all main sectors of public policy. Some adaptation principles are fundamental to conserving biodiversity in a time of rapid climate change, including taking practical action now, maintaining and increasing ecological resilience and accommodating change.

2.12 Whilst the national picture provides the policy context for climate change issues, which itself is evidence based, it also provides baseline data and monitoring information. For example, the UK Climate Projections (DEFRA)[11], provides access to data, on how the climate could change, for future emissions scenarios. Alongside the projections, there is the Government's Climate Change Adaptation Programme[12].

3. Regional Context

Regional Spatial Strategy (RSS)

3.1 The Regional Spatial Strategy (RSS)[13] currently forms part of the development plan but is set to be removed once proposals by the Government, through the Localism Bill (December 2010) are enacted. The District Council has resolved that the evidence upon which the RSS policies were developed and tested at an Examination in Public remains sound and

[6] There are proposals to progressively improve energy/carbon performance set in Building Regulations to achieve zero-carbon targets
[7] See Appendix 2 for further explanation about the Government's definition of 'zero carbon'
[8] See Appendix 2 for further information on the 'Code for Sustainable Homes'
[9] See Appendix 2 for further information on BREEAM (Building Research Establishment Environmental Assessment Method)
[10] England Biodiversity Strategy, Climate Change Adaptation Principles, Conserving biodiversity in a changing climate, DEFRA 2008
[11] The UK Climate Projections (UKCP09), June 2009, DEFRA (Department for the Environment, Food and Rural Affairs)
[12] Adapting to Climate Change in England: a framework for action, July 2008 (Defra)
[13] The Yorkshire and Humber Plan, May 2008

will continue to form part of the justification for the Selby District Core Strategy policies (notwithstanding the revocation of RSS itself).

3.2 Key policies which are relevant to climate change issues include; Policy YH2 (Climate Change and Resource Use); Policy ENV1 (Development and Flood Risk); Policy ENV2 (Water Resources); Policy ENV3 (Water Quality); and Policy ENV5 (Energy).

3.3 The over-arching climate change Policy (YH2) refers to plans helping to meet targets for reductions in greenhouse gas emissions and encouraging better energy, resource and water efficient buildings; as well as minimising energy demands from new development. Plans, strategies, investment decisions and programmes should increase renewable energy capacity and carbon capture.

3.4 Policy ENV5 seeks to increase energy efficiency through passive design, better use of existing power sources and other measures, and to increase installed renewable energy capacity in the Region. The RSS target for installed grid-connected renewable energy within Selby District is 14 megawatts (MW) by 2010, and 32 megawatts by 2021 and it expects Local Authorities to take action to ensure the regional and sub-regional targets are exceeded.

3.5 Policy ENV5 seeks to maximise renewable energy capacity by promoting and securing greater use of decentralised[14] and renewable[15] or low-carbon[16] energy in new development. In advance of local targets being set in DPDs, new developments of more than 10 dwellings or 1000m2 of non-residential floorspace should secure at least 10% of their energy from decentralised and renewable or low-carbon sources, unless, having regard to the type of development involved and its design, this is not feasible or viable. Development Plan Documents (DPDs) should set ambitious but viable proportions of the energy supply for new development to be required to come from such sources.

3.6 The RSS also focuses on maximizing the use of combined heat and power[17], particularly for developments with energy demands over 2 MW, and ensuring that development takes advantage of community heating[18] opportunities wherever they arise in the region, including near Selby.

Other Regional and Sub-Regional Strategies and Plans

3.7 The Sub Regional Renewable Energy Assessment and Targets Study (2004), undertaken at sub-regional level reviewed technical constraints and opportunities for renewable energy developments and undertook some landscape sensitivity assessment. It was used as the basis for Policy ENV5 of RSS, including the sub-regional and local level targets (and thus underpins the Core Strategy policies and targets).

[14] Decentralised energy is community or smaller scale generation of heat and power close to the point of use.
[15] Renewable energy is energy that occurs naturally and continuously in the environment, such as energy from the sun, wind, waves or tides.
[16] Low carbon energy is from the generation of heat and power with lower emissions than conventional means, by using more efficient technologies, fuels with lower carbon content or capturing and storing emissions.
[17] See Appendix 2 for further information on CHP.
[18] See Appendix 2 for more information on Community Heating Schemes

3.8 The study suggested that most of this renewable energy might come from wind turbines and biomass for co-firing in the power stations up to 2010, and that other technologies, such as photovoltaics would be increasingly significant thereafter, and help deliver more renewable energy up to 2021.

3.9 The Regional Adaptation Study[19] is another source of evidence for the Core Strategy as it provides information on:

- baseline information;
- the projected climate changes that the region will face by the 2050s;
- how these climate changes will impact on the region's society, buildings, infrastructure, biodiversity, public services, businesses and key economic assets;
- what needs to be done by organisations now to adapt to these predicted impacts and make the region more robust to the projected climate changes; and
- a Local Area Report of Selby District.

3.10 A recent ongoing study[20], provides up-to-date evidence for the District. It identifies potential of the region to meet the UK's 2020 climate change commitments and is focussed on identifying means for delivering that potential and any barriers to be overcome. It provides for each sub-region and each local authority area a consistent baseline covering a wide range of renewable and low carbon sources, an initial assessment of the potential capacity for each technology, maps in dictating the distribution of the potential resource and a strategic understanding of the capacity to deliver this.

3.11 Whilst the current stage identifies potential, the next stage will consider indicative targets. Further constraints will be applied to assess the viable resource including environmental designations, other planning constraints, economic factors, consumer choice, supply chain issues. The work is being undertaken with partners including LPAs and is intended to provide the bulk of PPS1 and PPS22 evidence base to save each LPA carrying out its own work individually. The emerging findings from the Study provide the justification for the Selby District Core Strategy policies.

4. Local Context

4.1 This section outlines the local policies and strategies which set the framework for what we need to include in the emerging development plan. It also provides more details on the specific local issues which provide the justification for the need to tackle climate change, renewable energy and sustainable development through the LDF.

[19] Yorkshire and Humber Climate Change Regional Adaptation Study (2009)

[20] Renewable and Low Carbon Energy Capacity Study for Yorkshire and Humber: Part B: Opportunities and Constraints Mapping – Draft Report , 2010, Undertaken by AECOM – see Appendix 1 for further reference.

a) Local Strategies

i) Selby Sustainable Community Strategy

4.2 Two of the five themes embodied in the Sustainable Community Strategy are particularly relevant to climate change issues:

- No. 3 Developing sustainable communities
- No. 4 Climate Change and the Environment

4.3 Specific aims relating to these themes, relevant to climate change issues for the Core Strategy include improving and protecting the quality of air, land and water in the District for local benefit, and helping to reduce the negative effect of climate change.

4.4 Within the Strategy, the Local Strategic Partnership acknowledges the priority central government gives to the issue of climate change; and its partners are taking this issue into account when developing their own strategies. These will focus on:

- upgrading flood defences; by developing solutions to reduce the risk, and militate against the impact of flooding;
- using non physical flood defence systems as opportunities to enhance habitats and biodiversity;
- preparing catchment management plans for main rivers;
- ensuring new developments carry out risk assessments;
- promoting energy conservation and domestic sources of renewable fuels;
- encouraging local power stations in the responsible use of renewable fuels; and
- contributing to the regional targets for renewable energy.

ii) SDC Climate Change Strategy (Including SDC Nottingham Declaration)

4.5 The Council is a signatory to the Nottingham Declaration on Climate Change, which commits the Council to contributing to the delivery of the national climate change programme, preparing a plan with the local community to address the causes and effects of climate change, reducing its own emissions, encouraging all sectors of the local community to reduce their own emissions, working with key providers to adapt to changes, and providing opportunities for renewable energy generation within the area.

4.6 The Strategy seeks to achieve a number of aims and includes a number of detailed targets in an Action Plan (the present document offers a plan of action for the District Council through to 2013). The Policies and Procedures are summarised in Appendix 3.

b) Local Issues

4.7 The primary issues facing Selby District are how to ensure that sustainable patterns of development are promoted, which will contribute to mitigation of the effects of climate change and adaptation to such changes. The key local issues are:

- Energy generation
- Protection of groundwater
- Flood risk management
- Minimising travel growth

Energy Generation

4.8 Existing fossil fuel power stations in the District play a vital role in providing energy as part of a diverse and secure energy mix (in addition to their economic role supporting local jobs and services). Drax and Eggborough power stations contribute significantly to the District green house gas emissions and as this power generation accounts for most of the District's emissions, we are unlikely to meet reduction targets.

4.9 However, national energy policy has highlighted security of supply issues arising from planned closures of a number of older coal-fired and nuclear power stations in the period to 2020, requiring greater reliance on continuing use of fossil fuelled generating plants and new investment in renewable and low carbon forms of energy generation. Implementation of this policy is demonstrated at Drax by the co-firing of biomass and the proposals to develop a biomass fuelled electricity generating plant. The policy recognises that energy is vital to economic prosperity and social well-being and so it is important to ensure the country has secure and affordable energy.

4.10 In the light of known and planned schemes, and the existence of local coal mines and traditional coal fired power stations, Selby District is particularly well placed to exploit opportunities for carbon capture, clean coal technology and coal bed methane as well as potential for appropriate biomass, energy from waste and combined heat and power. As such the Government's aim to reduce carbon emissions through the promotion of 'clean coal technologies' (essentially the employment of carbon capture and storage or CCS)[21] will be a key issue for Selby over the plan period and beyond.

4.11 However, it should be recognised that CCS is a developing technology and not currently applicable on a commercial scale, although the Government has recently announced it is committed to four commercial-scale CCS projects and money is to be made available for the first commercial scale CCS demonstration project. Proposals for carbon capture and storage (clean coal technology) may be of such a scale as to be determined at national level rather than the District Council as planning authority. Proposals for coal bed methane extraction are a minerals matter and therefore fall within the remit of

[21] See Climate Change Background Paper 8 for more information about technologies and the background for CP12, CP13 and CP14.

North Yorkshire County Council as the minerals authority. Planning applications will be considered against the relevant saved policies in the Minerals Local Plan until replaced by the emerging Minerals Core Strategy due for Adoption in December 2013.

4.12 Recovering energy from waste adds value before final disposal (after other opportunities for recycling or composting have been explored). Waste can come from a variety of sources and there is a range of different processes to produce the energy (including for example from landfill gas). One of the most common methods is incineration. The North Yorkshire County Council, as Waste Disposal Authority would deal with any planning applications for energy from waste schemes. Developments would be considered against the saved policies in the Waste Local Plan until such time as they are replaced by the emerging Waste Core Strategy; due for Adoption in December 2013.

Groundwater

4.13 The District contains significant groundwater supplies including both the Sherwood Sandstone aquifer and the Magnesian Limestone aquifer (which provides a vital water supply for the brewing industry in and around Tadcaster). There are also a number of wells for potable water abstraction in the southern part of the District which form part of a larger well-field for public supply. This water resource is already over-committed.

4.14 In some areas the protective drift material is missing and therefore the public water supply is very susceptible to contamination. Consideration must be given to the protection of water quality and prevention of pollution to the ground water supply.

4.15 Climate change will lead to drier summers and wetter winters, increased flood risk in winter and a longer growing season. This will put increased pressure on related infrastructure and water resources. There is therefore a need to protect existing resources and encourage water conservation measures and encourage water efficiency to help the District adapt to climate change and ensure sufficient water resources to meet its needs.

Flood Risk Management

4.16 Risk of flooding is a major issue for Selby District[22]. The Council's Level 1 Strategic Flood Risk Assessment (L1SFRA) shows that significant flood risks exist across relatively large areas of the District, which primarily affects Selby, and a number of villages.

4.17 As a significant number of potential development sites in Selby and other sustainable locations fall within higher flood risk areas, a PPS 25 'Sequential Test' and a Level 2 Strategic Flood Risk Assessment have also been undertaken[23]. The Sequential Test reveals that Sherburn in Elmet, Tadcaster and a number of the larger villages are relatively unconstrained in flood risk terms and can accommodate additional growth on low flood risk land. Selby is however relatively constrained and the Level 2 SFRA demonstrates how the impacts of potential flooding on the Olympia Park Strategic Development

[22] See Key Diagram in Core Strategy for indication of extent of areas of high flood risk, Zone 3
[23] Selby Strategic Flood Risk Assessment (SFRA)

Site can be satisfactorily minimised and mitigated[24] without increasing flood risk elsewhere.

4.18 The District's susceptibility to flooding also provides opportunities unique to the area. For example, flood waters can be accommodated without harm to the built environment by creating natural flood water sinks such as wet woodlands, reedbeds and low lying pastures in flood risk areas. This both helps to prevent flooding and creates a wider range of natural habitats. The incorporation of SuDS promotes groundwater discharge; a particular local issue in this over-abstracted area as well as reducing run-off and consequently the risk of flooding. And where SuDS are designed to increase the value for wildlife, this enhances biodiversity resilience to climate change.

Minimising Travel Growth

4.19 There are currently high levels of out-commuting which contribute to carbon emissions. Reducing the number and length of journeys, particularly by private car should contribute to carbon savings. Directing new development to the most sustainable locations and by supporting Selby, Sherburn in Elmet and Tadcaster as hubs for rural economies, community and social infrastructure should improve the District's self-containment to help meet these challenges.

4.20 Seeking complementary mechanisms for reducing the need to travel is also a key issue. For example encouraging developers to provide a range of sustainable travel options and promoting active traffic management and integrated demand management interventions as an alternative to increasing road capacity.

4.21 The generally level terrain of the District lends itself to cycle use and the District is crossed by two National Cycle Routes (Route 65 – part of the Trans-Pennine Trail through Selby between Hull and Middleborough and Route 66 through Tadcaster between Hull and Manchester via York). The focus of development on the main towns and Designated Service Villages, especially near to Selby itself, provide considerable scope for promoting cycling journeys for both work and pleasure through the construction of dedicated cycle lanes and provision of cycle facilities as part of new developments.

5. Public Consultation responses

Issues and Options Stage (2006)

5.1 At this stage the Council outlined the range of issues highlighted through national and regional policy, set out the options for the District and asked for views on whether the scope was appropriate. The following issues and questions were identified:

- Reducing Greenhouse Gases
- Minimising the need to travel, particularly by private car

[24] For further information see Background Paper No. 7 "Strategic Development Sites"

- Encouraging Energy Efficiency
- Apart from flood risk management, are there any other areas where new planning policies are required to accommodate the impacts of climate change on the District?
- Should the Core Strategy contain a strategic policy on Renewable Energy and should this contain a target for production?
- Are specific policies required about certain types of development such as windpower?
- Should there be a new policy requiring a percentage of the energy to be used in large new residential, commercial or industrial developments to come from on-site renewable sources?

Further Options (2008)

5.2 The Further Options report stated the intention that the Core Strategy would introduce, for the first time in the District's formal planning documents, policies relating to climate change issues.

5.3 It set out the range of policies to be covered: energy conservation, renewable energy and flood risk management. In terms of energy conservation the policy will aim to manage the design and location of development to: reduce the need to travel, especially by private car; improve the energy efficiency and minimise resource consumption of developments; and promote use of sustainable design and construction techniques.

5.4 Other Core Strategy policies would support renewable energy projects within the District subject to their local impact being proportionate to their importance as energy generators, and support micro-generation proposals wherever possible, again subject to there not being an unacceptable impact on the locality.

5.5 The Report also set out the intension to propose a Core Strategy policy to ensure that a proportion of the energy needs of major residential/ industrial/ commercial/ leisure proposals is derived from on-site renewables or through other genuine decentralised, renewable and low carbon sources. The Council proposed 10% to be an appropriate percentage in these cases and asked for views on this level.

5.6 Consultation on the Further Options Report produced the following responses in relation to climate change policy:

- There is widespread support for an over-arching climate change policy.
- There is need for a policy to reduce predicted CO_2 emissions in new development and how we will achieve national and regional targets.
- Requirements to reduce energy wasted and encourage higher energy efficiency and developments should be properly carbon neutral

- How will we meet energy efficiency targets outlined in the Housing Green paper (July 2007) (Code for Sustainable Homes and zero carbon homes by 2016) and the government aspiration for all non-domestic buildings to be zero carbon from 2019?
- The policies should promote use of sustainable construction and design techniques – water heating storage, grey water recycling, higher thermal insulations in buildings, green roofs, SuDS.
- Encouragement of specific technologies such as Combined Heat and Power (CHP).
- Broad locations where renewable energy development would be planned for and set out criteria to reflect local circumstances – reflecting PPS1 supplement and PPS22.
- Need to promote Coal Bed Methane extraction and Carbon Capture and Storage technologies, especially associated with the disused mine sites within Selby District.

5.7 The consultation on Further Options also indicated reasonable support for the 10% targets for decentralised, low-carbon and renewable energy. Most respondents considered this should be based on sound evidence and have flexibility in any requirements where viability might be threatened or where special restrictions would apply. Others stated that the Core Strategy should make reference to RSS targets for installed grid connected renewable energy capacity.

5.8 Concern over the potential for increased flooding events was expressed by a number of respondents as part of the Core Strategy consultation.

Consultation Draft Core Strategy (2010)

5.9 Based on the evidence available and in the light of comments, it was considered that the Core Strategy could contribute to the objectives of tackling climate change in a number of ways:

- Reducing the need to travel and minimising traffic growth, for example by locating new development in the most sustainable locations and supporting Principal Towns and Local Service Centres as hubs for rural economies, community and social infrastructure. Improving access to alternative modes such as walking and cycling is a complimentary objective.
- Protecting valuable and scarce resources, and improving resource efficiency, by encouraging better energy and water efficient buildings and minimising resource demand from development.
- Increasing renewable energy capacity, by supporting stand alone schemes from all 'green' technologies, to meet established targets, but especially from biomass and energy from waste which are being promoted locally

- Supporting micro-generation schemes for renewable energy
- Encouraging local combined heat and power and community heating projects
- Reducing reliance on energy from fossil fuel by requiring some of the energy needs from new developments to be from de-centralised and renewable or low-carbon sources.
- Encouraging sustainable design and construction techniques as part of expectations for high quality design
- Supporting clean coal bed methane extraction and carbon capture and storage technologies where appropriate
- Planning for mitigation and adaptation to the predicted impacts of climate change such as managing the effects of increasing flood risk, habitat management and warmer urban environments.

5.10 Therefore, the Draft Core Strategy contained a suite of cross-cutting climate change policies and three specific policies: on the topics of climate change (CP12), energy efficiency (CP13) and renewable energy (CP14) – which are complex issues and these policy areas over-lap in many areas.

5.11 The full document can be viewed on the Council's website[25] as well as both the comments received and the Council's responses to the representations[26]. The scope and justification of the policies is briefly described below.

Reducing the Need to Travel by Private Car

5.12 Reducing the need to travel, minimising traffic growth, and improving access to alternative modes such as walking and cycling is a theme running through a number of proposed policies in the Core Strategy. Policy CP1 (spatial development strategy), ensures the majority of new development to the towns and more sustainable locations. Policy CP2 (scale and distribution of housing) provides that the majority of new housing development is concentrated in and around the main town of Selby, with additional homes being provided to meet local needs in the local service centres and designated service villages.

5.13 The following policies promote similar outcomes, namely:

- Policy CP4 (housing mix) seeks to ensure the correct types and sizes of homes are provided in the right locations.
- Policies CP5 and CP6 aim to reduce the need to travel by providing affordable homes in areas of local need.
- Policy CP8 (access to services, community facilities and infrastructure) requires essential needs in connection with new

[25] Draft Core Strategy: http://www.selby.gov.uk/service_main.asp?menuid=&pageid=&id=1846)
[26] Consultation submissions and Council responses:
http://www.selby.gov.uk/service_main.asp?menuid=2&pageid=&id=1933

development to be provided in phase with development, without which, expanding communities may need to travel to gain access to services and facilities elsewhere.

- Policy CP9 (economic growth) seeks to ensure enough land for new jobs is provided in sustainable locations within the District to help reduce the need for the resident population to travel to adjacent areas for work; whilst Policy CP10 aims to provide essential rural diversification opportunities appropriate in the rural area.
- Policy CP11 (town centres and local services) aims to protect and enhance existing centres in order to serve the needs of the catchments of the relevant centres. The policy requires proposals improve the accessibility to the main centres particularly through public transport and provide a safe environment for pedestrians.

5.14 In response to flood risk issues and the anticipated increasing impact of climate change, Policy CP1 seeks to direct development, to locations where the impact of flooding can be managed and mitigated, including the proposed urban extension at Olympia Park, to the east of Selby in accordance with PPS25 Sequential Test and Level 2 SFRA (Selby Strategic Flood Risk Assessment).

5.15 Policy CP15 (protecting and enhancing the environment) tackles the bio-diversity issues of protection, mitigation and adaptation to climate change.

5.16 Policy CP16 (design quality) requires new development to incorporate sustainable construction principles.

Over-arching Policy for Climate Change and Sustainable Development

5.17 The over-arching climate change Policy, CP12 provides the local context that reinforces the Council's commitment to tackling climate change through the Core Strategy. The considerations included within this policy are regarded as a comprehensive list of general points relating to development and climate change and set the overall strategic direction for the District on climate change issues.

Improving Resource Efficiency

5.18 There is a recognised requirement to manage development in order to reduce the use of scarce water and energy resources. It is equally important to ensure that the energy we do use comes from decentralised, renewable or low-carbon sources. Evidence indicates that Selby District is well placed to accommodate specific solutions in the light of the high level of development proposed during the Core Strategy period.

5.19 The Core Strategy therefore includes a policy (CP13) to improve resource efficiency in new build developments as a contribution to tackling climate change at the local level.

5.20 The policy requires a 10% contribution through decentralised, renewable or low-carbon sources of energy, from schemes meeting a prescribed threshold (in line with RSS Policy ENV5). Policy CP13 does not seek a higher proportion due to lack of local evidence on viability at the present time. It

does however indicate that schemes will need to meet revised targets, which may be introduced in the future in accordance with higher level plans and guidance or following local research.

5.21 The specific reference in the policy to local biomass technologies, energy from waste, combined heat and power and community heating projects is considered to be justified as these technologies are promoted through national guidance (and RSS), and there are local examples of such technologies. The relative close proximity between local existing and known planned schemes for both energy from waste and biomass technologies, and planned large scale development in the District, make it possible for the Core Strategy to link specific new development with known sustainable energy sources. However, the Core Strategy does not attempt to identify site size thresholds for development schemes in view of the absence of local evidence on viability at the present time.

5.22 Wherever possible, developments will be encouraged to meet national standards and best practice schemes, which seek to improve environmental standards, moving towards the Government's target of zero carbon development (Code for Sustainable Homes and BREEAM), subject to viability.

5.23 The PPS1 Climate Change Supplement states that local planning authorities should 'specify the requirement in terms of achievement of nationally described buildings standards, for examples in the case of housing by expecting identified housing proposals to be delivered at a specific level of the Code for Sustainable Homes.'

5.24 The Code for Sustainable Homes and BREEAM standards are planning tools which seek to improve environmental standards, moving towards the Governments target of zero carbon development[27].

5.25 Consideration has been given as to whether it is appropriate to include specific requirements for a proportion or all developments to meet the Code for Sustainable Homes and BREEAM standards within a particular timescale. However there is no robust local evidence on which such requirements can be based and unlikely to be available prior to the imminent introduction of Government mandatory requirements.

5.26 Building Regulations provide mandatory requirements including water conservation measures, insulation efficiency standards for example relating to carbon performance. Planned tightening of Building Regulations energy efficiency standards for all homes in any case are as follows:

- Code Level 3 by 2010 (25% energy efficiency improvement compared to 2006)
- Code Level 4 by 2013 (44% energy efficiency improvement compared to 2006)
- Code Level 6 by 2016 (zero carbon)

[27] See Appendix 2 for further information

Renewable Energy

5.27 The PPS22 Companion Guide states that planning policy at the local level needs to provide guidance in relation to both standalone renewable energy schemes and the integration of renewable energy into new development. The Core Strategy should clarify the importance of addressing sustainability objectives within an over-arching policy, whilst specific policies on renewable energy will be provided in a Development Plan Document. The policies could be supported by Supplementary Planning Documents covering specific aspects on the full range of issues on renewable energy.

5.28 The PPS states that the Core Strategy policy should:

- encourage developers to consider a range of RE technologies on their site
- be flexible as not all technologies are appropriate for all sites and locational constraints should be borne in mind
- not place undue burden on developers

5.29 Bearing in mind this advice and the evidence set out above, it was proposed to include a specific renewable energy policy (CP14) in the Core Strategy.

5.30 RSS sets targets for grid-installed renewable energy capacity. It is considered appropriate to adopt the RSS renewable energy targets locally through the Core Strategy and have regard to any revised targets (which may be developed at higher level of locally through further work on future DPDs).

5.31 In the light of the significant progress already made in granting planning permission for renewable energy projects in the District, consideration has been given to adopting higher local targets than Regional Spatial Strategy for installed grid connected Renewable Energy. National and regional policy indicates that these targets should be regarded as a starting point and not a ceiling. However, there are considerable difficulties in finding robust evidence to justify higher targets specifically for Selby District for the Plan Period.

5.32 The Council will continue to encourage all renewable energy schemes to realise further potential, unless their adverse impacts on the District are considered not to justify the energy gains achievable.

5.33 It is also appropriate to support micro-generation schemes subject to normal development management considerations.

5.34 PPS22 suggests that Local Authorities may wish to identify those broad areas suitable for particular types of renewable energy projects. This issue was also raised in the previous consultation stage.

5.35 There are no specific national or locally designated areas that would automatically preclude renewable energy developments in Selby District. However where renewable energy proposals would conflict with the openness of the Green Belt (and are therefore inappropriate within the PPG2 definition) developers will need to demonstrate very special circumstances that clearly outweigh any harm to the Green Belt. Each application will be

considered on its individual merits subject to national, regional and local policies with careful consideration of cumulative impacts where a number of proposals come forward.

5.36 In general terms it is considered that the whole District is suitable for all types of renewable energy technologies, as evidenced from sub-regional studies[28] (which mapped constraints, landscape sensitivity and opportunities for a range of technologies) and local landscape assessments[29], subject, to considering each case on its own merits.

5.37 Because it is difficult to make any strong distinctions across the District, based on existing evidence, and it is considered any such definitions would be artificial and of limited value, there is no justification for including areas of search at this stage.

5.38 Clean coal bed methane (CBM)[30] extraction and carbon capture and storage (CCS)[31] technologies are two areas which are worthy of consideration. They are referred to in national policy (most recently in The UK Low Carbon Transition Plan 2009 and The UK Renewable Energy Strategy 2009) and particularly by respondents in the previous consultation on the Further Options for the Core Strategy. Given the potential contribution to the climate change debate (although not necessarily strictly 'renewable energy') it is appropriate to refer to these elements as a part of the overall climate change response in the Core Strategy. However, due to the relative infancy of these technologies, potential adverse impacts on amenity of such schemes, and the lack of evidence nationally and locally to underpin a more detailed policy at this stage, it is considered appropriate to only refer to the potential of utilising these where appropriate. Further it is likely that such schemes will be large in size and therefore be considered at national rather than local planning authority level.

6. Submission Draft Core Strategy (January 2011)

6.1 In the light of consultation responses and other up-to-date evidence, Policies CP12, CP13 and CP14, and the accompanying text have been amended in the Submission Draft Core Strategy. The changes are summarised as follows:

CP12 - Climate Change and Sustainable Development

6.2 Text amended to provide more clarity on the various facets of climate change issues (reducing carbon emissions, mitigation and adaptation of the effects of

[28] Delivering Sustainable Energy In North Yorkshire: Recommended Planning Guidance October 2005 and Sub Regional Renewable Energy Assessment and Targets Study, 2004 (SREATS) and the Renewable and Low Carbon Energy Capacity Study for Yorkshire and Humber: Part B: Opportunities and Constraints Mapping – Draft Report 2010

[29] Selby District Landscape Assessment, Woolerton Dodwell for Selby District Council, 1999 and Landscape Appraisals Background Paper 10 – *NB These are included for general information – no specific analysis has been undertaken in relation to potential impacts on the landscape of particular types of projects such as wind farms.*

[30] See Appendix 2 for further information on CBM

[31] See Appendix 2 for further information on CCS

rising temperatures and increased flooding) and promoting sustainable development.

6.3 Section reformatted to provide a more locally distinctive focus; highlighting the specific issues for Selby District which are: energy generation, protection of groundwater, flood risk management and minimising travel growth.

6.4 More prominence has been given to fossil-fuelled power stations as part of the local economy, their contribution to carbon emissions and potential to lead on low-carbon and renewable energy generation as a particular local issue.

6.5 Policy CP12 has been split into two parts: the first addresses what the Council will do to promote sustainable development; and the second to set out in overall terms, how developers should design and layout developments to meet Core Strategy objectives for reducing carbon emissions and ensuring schemes are resilient to the effects of climate change.

6.6 More details are provided on flood risk/management issues, protection of water resources, tree planting, and sustainable transport including cycle facilities. A cross reference to Policies CP13 and CP14 is also incorporated.

CP13 - Improving Resource Efficiency

6.7 The text has been rationalised to remove reference to RSS policies but to retain the link with the regional and sub-regional evidence base which is still valid (as well as the emerging up-to-date study which is ongoing). The evidence underpins the retention of the local target for 10% of energy requirement on new development to be derived from decentralised, low carbon and decentralised sources.

6.8 Additional reference to the County Council Waste Local Plan/LDF is included with regard to determining proposals for energy from waste.

6.9 Some respondents submitting comments on the Draft Core Strategy wanted the requirements for developments to meet the Code for Sustainable Homes/BREEAM standards removed in the light of impending mandatory requirements and lack of local evidence. Others considered the Core Strategy CP13 hadn't gone far enough and wanted more stringent requirements.

6.10 The Climate Change PPS (in paragraph 33) requires planning authorities to ensure that any local requirements for decentralised energy or sustainable buildings are evidence based and viable. The District Council is relying on existing evidence developed as part of the former RSS for the requirements for decentralised energy. However, it has not undertaken a viability study for Code requirements. On balance, without further viability studies it is considered difficult to include specific targets and requirements at this stage. Instead, in the interim, in view of national expectations as well as the impending mandatory requirements for the Code levels, the policy encourages developers to achieve the highest viable/practical nationally recognised standards for new building in advance of further detailed work as part of future DPDs.

CP14 - Low Carbon and Renewable Energy

6.11 The text has been rationalised to remove reference to RSS policies but to retain the link with the regional and sub-regional evidence base which is still valid (as well as the emerging up-to-date study which is ongoing). The evidence underpins the retention of the local target in Policy CP14 for 32 MW by 2021 of renewable energy in stand-alone schemes (from the full range of technologies, not just wind turbines). It also highlights that this is a minimum target and it may change in the light of up-to-date evidence.

6.12 The policy is reformatted into two sections dealing with general development management issues and identifying which types of scheme fall within the scope of the policy.

6.13 Additional reference is made to the County Council Minerals Local Plan/LDF with regard to consideration of proposals for coal bed methane extraction, clean coal technologies and carbon capture and storage (CCS). Further text explains that CCS is a developing technology and that any proposed schemes are likely to be dealt with at national level.

6.14 A more positive protection of the environment and local amenity is incorporated.

6.15 The policy is expanded to refer to low-carbon energy as well as renewable energy. Further, the policy now supports improvements at existing fossil fuel energy generating plants to reduce carbon emissions, within the national energy strategy for a balanced mix of energy sources to meet demands.

7. Conclusions

7.1 Whilst the District Council has not undertaken specific research or commissioned further studies directly in response to climate change issues, the proposed policies in the Selby District Core Strategy have been formulated in direct response to evidence from a variety of sources. These include evidence available from government reports, regional and sub-regional work, local commitments in existing strategies and taking account of local circumstances, including public consultation responses.

7.2 It is considered that the proposed Core Strategy policies provide a sound strategic direction on a range of climate change issues appropriately formulated at this level in the light of the evidence available.

7.3 The Council will expect developers to submit energy statements with planning applications and any necessary viability assessments in order to assess compliance with the Core Strategy policies. The submission of good quality information on energy demand and savings is a means of demonstrating that development proposals meet policy objectives.

7.4 It is envisaged that future DPDs, SPDs and guidance will tackle detailed issues on stand alone renewable energy schemes (such as siting and design, landscape and cumulative visual impact, noise/odour, habitat or species disturbance, listed buildings, conservation areas). Future evidence base work will help determine whether additional policies should be incorporated into the

Development Management DPD and/or the Site Allocations DPD - or other Area Action Plan DPD.

Appendix 1 Further references / Evidence Base

This Appendix is split into two sections:

A. Policy and Guidance and Further Reading

B. Technical Evidence

Within each section the information is grouped into national, regional/sub-regional and local level.

Document Title and Link	Date
A. Policy and Guidance and Further Reading	
A. National	
EU Directive 2009/28/EC The promotion of the use of energy from renewable sources; UK committed to sourcing 15% of its energy from renewable sources by 2020	2009
Consultation on a PPS: Planning for a Low Carbon Future in a Changing Climate (closed February 2010) Will eventually be new Supplement to PPS1 which will replace PPS22 and PPS1 Supplement. LDFs to focus on decentralised energy, including heat mapping/energy master-planning. Can set local 'stretching' renewable and low carbon energy targets.	2009
Household Energy Management Strategy (March 2010) Greater emphasis on district heating schemes. Identified an essential role for planning in facilitating delivery of these and other community scale energy schemes. Plans for reduction of 29% in carbon emissions from household sector by 2020.	2010
UK Low Carbon Transition Plan This is the national strategy for climate and energy. This White Paper sets out the UK's first ever comprehensive low carbon transition plan to 2020. This plan aims to deliver emission cuts of 18% on 2008 levels by 2020 (and over a one third reduction on 1990 levels). www.decc.gov.uk/en/content/cms/publications/lc_trans_plan/lc_trans_plan.aspx	2009
The UK Renewable Energy Strategy Sets out the path for delivering legally-binding targets to ensure 15% of UK's energy comes from renewable energy sources by 2020 www.decc.gov.uk/en/content/cms/what_we_do/uk_supply/energy_mix/renewable/res/res.aspx	2009

PPS1 Delivering Sustainable Development Includes aspirations to address the causes and potential impacts of climate change; reduce energy use; promote water efficiency; reduce emissions; promote renewable energy use; secure appropriate location and design of development; and promote sustainable and inclusive patterns of urban and rural development.	2005
PPS1 Climate Change Supplement www.communities.gov.uk/publications/planningandbuilding/ppsclimatechange Including web-based **Practice Guide** hosted by the Homes and Communities Academy at http://www.hcaacademy.co.uk/planning-and-climate-change Makes clear that tackling climate change is central to what is expected of good planning. Planning authorities should 'specify the requirement in terms of achievement of nationally described buildings standards, for examples in the case of housing by expecting identified housing proposals to be delivered at a specific level of the Code for Sustainable Homes.' The Supplement requires LPAs to have an evidence-based understanding of the local feasibility and potential for renewable and low-carbon technologies, and to undertake their own assessments. LPAs should set out target percentages where it is viable, set out the type and size of development to which the target will be applied and ensure there is a clear rationale for the target and it is properly tested. Such policies should be set out in a DPD not an SPD. There are national proposals to progressively improve energy/carbon performance set out in Building Regulations to achieve zero-carbon[32] housing by 2016 and zero-carbon non-domestic buildings by 2019. The PPS1 Supplement on Climate Change (2007) seeks to support the achievement of zero carbon homes through the planning system. Other relevant national targets are a cut in GHG (green house gases) by 20% in CO_2 below 1990 levels by 2010, and 60% cut by 2050. **Renewable Energy 'Areas of Search'** Guidance contained in PPS1 Supplement and PPS22 (Renewable Energy) highlights that Local Authorities should set out criteria to reflect local circumstances and identify where renewable energy development may be considered appropriate.	2007
PPS3 Housing Advocates making best use of land and encouraging new building technologies to deliver sustainable development.	2006
PPS4: Planning for Sustainable Economic Growth Outlines national objectives for planning to help achieve sustainable economic growth including growth that can be sustained and is within environmental limits, but also enhances environmental and social welfare and deliver more sustainable patterns of development, reduce the need to travel, especially by car and respond to climate change.	2009
PPS7 Sustainable Development in Rural Areas Supports sensitive exploitation of renewable energy sources.	2004

[32] See also Appendix 2

PPS9 Biodiversity and Geological Conservation Account for climate change on distribution of habitats and species, and geomorphologic processes and features and developing and protecting habitat networks.	2005
England Biodiversity Strategy Seeks to ensure biodiversity considerations become embedded in all main sectors of public policy and has just published Climate Change Adaptation Principles – Conserving biodiversity in a changing climate	2008
PPG13 Transport Focuses on reducing the need for travel, especially by car, by influencing the location of development, fostering development, which encourages walking, cycling or public transport.	2001
PPS22 Renewable Energy Promotes increased development of renewable energy (and Companion Guide) http://www.communities.gov.uk/publications/planningandbuilding/planningrenewable	2004
Planning for Renewable Energy: A Companion Guide to PPS22 States that planning policy at the local level needs to provide guidance in relation to both standalone renewable energy schemes and the integration of renewable energy into new development. The Core Strategy should clarify the importance of addressing sustainability objectives established by the LPA within an over-arching policy, whilst specific policies on RE will be provided in a DPD. http://www.communities.gov.uk/publications/planningandbuilding/planningrenewable	2004
PPS23 Planning and Pollution Control Suggests that planning should reduce greenhouse gas emissions and take account of potential effects of climate change where possible.	2004
PPS25 Development and Flood Risk Planning policies and decisions should reflect the increased risk of coastal and river flooding as a result of climate change.	2006
Planning & Energy Act An Act to enable local planning authorities to set requirements for energy use and energy efficiency in local plans. A local planning authority may in their development plan documents, include policies imposing reasonable requirements for: (a) a proportion of energy used in development in their area to be energy from renewable sources in the locality of the development; (b) a proportion of energy used in development in their area to be low carbon energy from sources in the locality of the development; (c) development in their area to comply with energy efficiency standards that exceed the energy requirements of building regulations. Also introduced feed in tariffs (FITs) and Renewable heat Incentive aimed at driving an increase in renewable energy generating capacity, which will have an	2008

impact on planning. Introduced new planning regime for nationally significant infrastructure projects, including energy generation over 50MW. www.opsi.gov.uk/acts/acts2008/pdf/ukpga_20080021_en.pdf	
Climate Change Act The UK has passed legislation which introduces the world's first long-term legally binding framework to tackle the dangers of climate change. The Climate Change Act creates a new approach to managing and responding to climate change in the UK, including by setting ambitious, legally binding targets – statutory target of reducing carbon emissions by 80 per cent below 1990 levels by 2050 with an interim target of 34% by 2020. www.opsi.gov.uk/acts/acts2008/pdf/ukpga_20080027_en.pdf	2008
The UK Low Carbon Industrial Strategy http://interactive.bis.gov.uk/lowcarbon/2009/07/low-carbon-industrial-strategy/	2009
Low Carbon Transport: A Greener Future http://www.official-documents.gov.uk/document/cm76/7682/7682.pdf	2009
The Energy White Paper www.berr.gov.uk/files/file39564.pdf	2007
Planning Act www.opsi.gov.uk/acts/acts2008/pdf/ukpga_20080029_en.pdf	2008
Draft NPSs http://www.nationalpolicystatements.org.uk/ In November 2009 the Government launched a consultation on six draft National Policy Statements for Energy. These were: Overarching National Energy Infrastructure Policy (EN1); Fossil Fuels (EN2; Renewables (EN3); Gas Supply / Pipelines (EN4); Electricity Networks (EN5); and Nuclear (EN6). The Government is now consulting on the revised draft NPSs and associated documents. The key changes can be summarised as follows: Need for the Infrastructure – the need for each of the different energy infrastructure technologies has been updated, clarified and simplified and is now all found in the Overarching Energy NPSs (EN1).	2009/ 2010
UK Biomass Strategy www.decc.gov.uk/en/content/cms/what_we_do/uk_supply/energy_mix/renewable/explained/bioenergy/policy_strat/policy_strat.aspx	2007
Consultation on a Planning Policy Statement: Planning for a Low Carbon Future in a Changing Climate www.communities.gov.uk/publications/planningandbuilding/ppsclimateconsultation	2010
Sustainable New Homes: The Road to Zero Carbon: Consultation on the Code for Sustainable Homes and the Energy Efficiency standard for Zero Carbon Homes, DCLG,	2009

http://www.communities.gov.uk/publications/planningandbuilding/futureofcodeconsultation	
Definition of Zero Carbon Homes and Non-Domestic Buildings Consultation, Department for Communities and Local Government http://www.communities.gov.uk/planningandbuilding/theenvironment/zerocarbonhomes/	2009
Written Ministerial Statement on "Sustainable Homes" by John Healey MP, Minister for Housing and Planning, http://www.communities.gov.uk/statements/corporate/sustainablehomes	2009
The **UK Low Carbon Transition Plan**: National Strategy for Climate & Energy, , Department of Energy and Climate Change (DECC) http://www.decc.gov.uk/en/content/cms/publications/lc_trans_plan/lc_trans_plan.aspx	2009
The **UK Renewable Energy Strategy**, Department of Energy and Climate Change (DECC) http://www.decc.gov.uk/en/content/cms/publications/lc_trans_plan/lc_trans_plan.aspx	2009
Proposed Changes to Part L and F of the Building Regulations: A consultation paper, , Department for Communities and Local Government http://www.communities.gov.uk/publications/planningandbuilding/partlf2010consultation	2009
The Code for Sustainable Homes – Setting the Standard for new homes, DCLG, February 2008 http://www.communities.gov.uk/planningandbuilding/buildingregulations/legislation/codesustainable/	2008
Code for Sustainable Homes: Technical Guide, May, DCLG http://www.communities.gov.uk/publications/planningandbuilding/codeguide	2010
BREEAM (BRE Environmental Assessment Method) http://www.breeam.org/page.jsp?id=66	
Planning and Compulsory Purchase Act (as amended by **Planning Act 2008)** 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.	2004
Adapting to Climate Change in England: a framework for action, Department for the Environment, Food and Rural Affairs (Defra), July 2008 http://www.defra.gov.uk/environment/climate/programme/index.htm	2008
England Biodiversity Strategy, Climate Change Adaptation Principles, Conserving biodiversity in a changing climate, DEFRA 2008 http://www.defra.gov.uk/wildlife-countryside/biodiversity/climate.htm	2008

Building a Greener Future: Policy Statement, DCLG, July 2007 http://www.communities.gov.uk/publications/planningandbuilding/building-a-greener	2007
A. Regional/Sub-Regional	
The Climate Change Plan for Yorkshire & Humber http://www.yourclimate.org/cb.aspx?page=312992EB-8EBA-45AC-84B2-1C88227D5CA6	2009
Renewable Energy Toolkit – A Guide for Local Authority Planners in Yorkshire and Humber, LGYH and Yorkshire Forward, June http://www.renewable-energy-toolkit.org.uk/regional/energy_resources_and_infrastructure	2009
Yorkshire and Humber Climate Change Regional Adaptation Study, 2009 http://www.adaptyh.co.uk/home.htm	2009
Sustainable Community Strategy for North Yorkshire 2008/18 http://www.nysp.org.uk/html/sustainable-community-strategy/	
North Yorkshire County Council, Climate Change Strategy *http://www.northyorks.gov.uk/CHttpHandler.ashx?id=7912&p=0*	2009
'Your Climate - A Climate Change Action Plan for Yorkshire and The Humber', 9 December 2005 http://www.yourclimate.org/siteassets/documents/yourClimate/F/4/F45C905D-9F57-4416-A3EC-D050610DC1C7/2/CCAPSummaryDoc_June2006_web.pdf	2005
A. Local	
Selby District Council, Climate Change Strategy, 2008-2013 http://www.selby.gov.uk/service_main.asp?menuid=&pageid=&id=1602	

B. Technical Evidence	
B. National	
UK Climate Projections 2009, Department of Communities and Local Government (DCLG), published 18 June http://ukclimateprojections.defra.gov.uk/content/view/868/531/	2009
Cost Analysis of The Code for Sustainable Homes: Final Report, DCLG, July 2008 http://www.communities.gov.uk/publications/planningandbuilding/codecostanalysis	2008
Stern Review on the Economics of Climate Change, October 2006 http://www.hm-treasury.gov.uk/sternreview_index.htm	2006
B. Regional and Sub-Regional with Local Level Data	

Renewable and Low Carbon Energy Capacity Study for Yorkshire and Humber: Part B: Opportunities and Constraints Mapping – Draft Report Undertaken by AECOM consultants in line with new national methodology proposed by the Department for Energy and Climate Change (2009). http://www.lgyh.gov.uk/dnlds/YH%20Part%20B%20report.pdf	2010
Regional Spatial Strategy for Yorkshire and Humber, Annual Monitoring Report 2008 (February 2009) http://www.lgyh.gov.uk/dnlds/AMR%2008.pdf	2009
Delivering Sustainable Energy in North Yorkshire, Recommended Guidance for Developing Energy Action Plans and Strategies, Produced by the National Energy Foundation and Land Use Consultants for a Partnership of North Yorkshire Local Authorities, October 2005 http://www.northyorks.gov.uk/index.aspx?articleid=3097	2005
Delivering Sustainable Energy In North Yorkshire: Recommended Planning Guidance Prepared For A Partnership Of Local Authorities In North Yorkshire By Land Use Consultants And National Energy Foundation, October 2005 and Figures (Sensitivity Mapping) http://www.northyorks.gov.uk/index.aspx?articleid=3097	2005
Yorkshire and Humber Regional Spatial Strategy and Climate Change Study, RESEARCH REPORT, Prepared for Yorkshire and Humber Regional Assembly by Land Use Consultants in association with Wilbraham & Co (the Planning & Environmental Practice of Cobbetts), 7 October 2005 http://www.yhassembly.gov.uk/dnlds/RSS%20and%20Climate%20Change%20Final%20research%20report.pdf and associated Appendices: http://www.yhassembly.gov.uk/dnlds/RSS%20and%20Climate%20Change%20Final%20Appendices.pdf	2005
Sub Regional Renewable Energy Assessment and Targets Study, 2004 (SREATS) – "Planning for Renewable Energy Targets in Yorkshire and Humber" FINAL REPORT, VOLUME 1: Main Report A report produced for Government Office for Yorkshire and Humber and the Yorkshire and Humber Assembly, December 2004 http://www.gos.gov.uk/497763/docs/199734/199731/247395/290895	2004
Regional Greenhouse Gas Emissions Monitoring and Modelling Study, Cambridge Econometrics (2002), and Regional Greenhouse Gas Emissions Monitoring and Modelling Study, Update of Baseline Data, Cambridge Econometrics (2003).	2003
Warming up the region: The impacts of climate change in the Yorkshire and Humber region. WS Atkins, Stockholm Environment Institute-York (SEI-Y), The Met Office. June 2002.	2002

B. Local Level	
Selby District Local Development Framework, Annual Monitoring Report http://www.selby.gov.uk/service_main.asp?menuid=&id=1352	2009
Selby District Landscape Assessment, Woolerton Dodwell for Selby District Council, 1999 http://www.selby.gov.uk/upload/Landscape_Assessment_of_Selby_District_Jan_99.pdf	1999
Selby District Core Strategy Background Paper 10 Landscape Appraisals http://www.selby.gov.uk/service_main.asp?menuid=&pageid=&id=1600	2011

Appendix 2 Further Technical Information and Definitions

Zero Carbon Development

In July 2007 the Government's *Building a Greener Future: Policy Statement* announced that all new homes will be zero carbon from 2016.

"The policy statement *Building a Greener Future* in 2007 set out a target for all new homes to be zero carbon from 2016 with interim steps along the way in 2010 and 2013 through Part L of the Building Regulations. Since then, this aim has been further developed and defined, and we have consulted on the next regulatory step of a 25 per cent improvement against 2006 standards in 2010.

In July 2009, following a public consultation on the detailed definition of zero carbon homes[7] a three step approach to reaching the zero carbon homes standard was confirmed by the Housing Minister, based on:

1. a high level of energy efficiency in the fabric and design of the dwelling
2. 'carbon compliance' – a minimum level of carbon reduction to be achieved from on-site technologies (including directly connected heat networks) and
3. 'allowable solutions' – a range of measures available for achieving zero carbon beyond the minimum carbon compliance requirements.

The July 2009 statement also confirmed other aspects of the zero carbon definition. It clarified that it would require a 70 per cent reduction in carbon emissions against 2006 standards through a combination of energy efficiency, on-site low and zero carbon energy supply and/or connections to low carbon heat networks ('carbon compliance'). The remaining emissions, including a calculated amount to cover the use of appliances, would be addressed through a system of 'allowable solutions' (including achieving further reductions on-site and a range of off-site measures)."

Source: Sustainable New Homes: The Road to Zero Carbon: Consultation on the Code for Sustainable Homes and the Energy Efficiency standard for Zero Carbon Homes, DCLG, 16 December 2009.

Code for Sustainable Homes

Source: "Sustainable New Homes: The Road to Zero Carbon: Consultation on the Code for Sustainable Homes and the Energy Efficiency standard for Zero Carbon Homes", DCLG, 16 December 2009

The Code for Sustainable Homes (the Code) was introduced in England in April 2007 following extensive consultation with environmental groups and the home building and wider construction industries.

The Code is a voluntary standard and complements the system of Energy Performance Certificates for new homes, which was introduced in April 2008 under the Energy Performance of Buildings (Certificates and Inspections) (England and Wales) Regulations 2007.

The Code measures the sustainability of a home against nine design categories, rating the 'whole home' as a complete package. The design categories are:

- Energy and CO_2 Emissions
- Water
- Materials
- Surface Water Run-off
- Waste
- Pollution
- Heath and Wellbeing
- Management
- Ecology

Each category includes a number of issues which have a potential impact on the environment. The issues can be assessed against a performance target and awarded one or more credits. They represent good or best practice, are technically feasible, and can be delivered by the building industry.

The sustainability rating system

The Code uses a sustainability rating system – indicated by 'stars', to communicate the overall sustainability performance of a home. A home can achieve a sustainability rating from one to six stars depending on the extent to which it has achieved Code standards. One star is the entry level – mostly above the level of the Building Regulations; and six stars is the highest level – reflecting exemplar development in sustainability terms. The sustainability rating that a home achieves represents its overall performance across the nine Code design categories.

Minimum standards exist for a number of categories – these must be achieved to gain a one star sustainability rating. Energy efficiency and water efficiency categories also have minimum standards that must be achieved at every level of the Code, recognising their importance to the sustainability of any home.

Apart from these minimum requirements the Code is completely flexible; developers can choose which and how many standards they implement to obtain 'credits' under the Code in order to achieve a higher sustainability rating.

When does the Code become mandatory?

The timetable for introducing higher standards of energy efficiency through Part L of the Building Regulations is a 25 per cent improvement on current (2006) standards in 2010 (Code Level 3) and 44 per cent improvement in 2013 (Code Level 4) , with all homes being net zero carbon from 2016 (Code Level 6).

BREEAM
(Building Research Establishment Environmental Assessment Method)
http://www.breeam.org/index.jsp

BREEAM is the world's most widely used environmental assessment method for buildings and sets the standard for best practice in sustainable design. It describes a building's environmental performance assessed against a set criteria to provide an overall score which will fall within a band providing either a; Pass, Good, Very Good, Excellent or Outstanding rating.

Combined Heat and Power (CHP)
Source: Combined Heat and Power Association
http://www.chpa.co.uk/about_chp/chp_faq.shtml

Combined Heat and Power (CHP) is the simultaneous generation of usable heat and power (usually electricity) in a single process. CHP is a highly efficient way to use both fossil and renewable fuels and can therefore make a significant contribution to the UK's sustainable energy goals, bringing environmental, economic, social and energy security benefits.

CHP systems can be employed over a wide range of sizes, applications, fuels and technologies. In its simplest form, it employs a gas turbine, an engine or a steam turbine to drive an alternator, and the resulting electricity can be used either wholly or partially on-site. The heat produced during power generation is recovered, usually in a heat recovery boiler and can be used to raise steam for a number of industrial processes, to provide hot water for space heating, or, as mentioned above with appropriate equipment installed, cooling.

Because CHP systems make extensive use of the heat produced during the electricity generation process, they can achieve overall efficiencies in excess of 70% at the point of use. In contrast, the efficiency of conventional coal-fired and gas-fired power stations, which discard this heat, is typically around 38% and 48% respectively, at the power station. Efficiency at the point of use is lower still because of the losses that occur during transmission and distribution.

CHP is a form of a decentralised energy technology. CHP systems are typically installed onsite, supplying customers with heat and power directly at the point of use, therefore helping avoid the significant losses (which occur in transmitting electricity from large centralised plant to customer).

Community Heating

Source: http://www.community-heating.co.uk/ - The dedicated information portal for Community Heating and CHP in the UK

Community Heating provides heat for homes, commercial and public buildings. Linking community heating with a high efficiency Combined Heat and Power (CHP) system means that electricity can also be produced and used locally.

Community heating systems replace individual heating systems within homes with locally-based heating plant, often based on CHP. Hot water from the CHP unit and other heat sources is pumped to homes and other buildings using a network of highly insulated pipes. Heat is then transferred using a small heat exchanger, to radiators and water heating cylinders just as in conventional heating systems.

The versatility of Community Heating enables it to be used on projects of any size, whether they cover a wide area such as a city or a concentrated location such as a town centre, university campus or hospital.

The cities of Sheffield, Nottingham and Southampton all have successful, large-scale community heating schemes operated by private/public sector energy services companies. Many other urban authorities, including most London Boroughs, Bristol, Mansfield, Doncaster, Wakefield and Manchester, operate smaller schemes typically serving individual housing estates.

Coal Bed Methane (CBM)

Most coal seams buried at depth will contain significant quantities of methane trapped within pores. The industry is still in its infancy. Coalbed methane is obtained by drilling into a coal seam, lowering the local pressure and collecting the gas that is released as a result. Methane can be extracted from coal seams that would be unsuitable or uneconomic to mine. Alternatively, it can be used to remove gas before mining, helping to reduce methane hazards associated with coal mining. Unlike underground coal mining, extraction of the gas does not cause subsidence of the land surface.

Coalbed methane wells take some 6-12 months to build up to full production. The production of commercial volumes of gas requires networks of boreholes with associated pipelines. The usual spacing is one borehole every 500-1000 metres.

The principal environmental considerations associated with the extraction of coalbed methane are the impacts associated with the exploration, development, operation and closure of a well field. A further significant environmental issue is the impact of water produced during well stimulation. The main type of water pollution during the extraction of coalbed methane is a high concentration of dissolved salts, causing high salinity. The scope for dilution into groundwater and watercourses and the sensitivity of aquatic organisms will determine the viability of surface discharge options and the degree of pre-treatment necessary. The Environment Agency can provide expert advice in this area.

Source: Nottinghamshire Minerals Local Plan
http://www.nottinghamshire.gov.uk/home/environment/planningmatters/mineralsandwasteplanning/localdevframework/oe-planningmatters-mineralslocalplan/mineralslocalplan/revisedminlp/remin-chapterthirteen.htm

Carbon Capture and Storage (CCS)

Fossil fuels will continue to play a significant role in the energy mix for the foreseeable future – both in the UK and internationally. If we are to tackle climate change, we need to find ways to reduce emissions from fossil fuels substantially.

Carbon Capture and Storage (CCS) has the potential to reduce CO_2 emitted from fossil fuel power stations by up to 90 percent. CCS is a three-step process which includes:

1. capturing the CO_2 from power plants and other industrial sources
2. transporting it, usually via pipelines, to storage points
3. storing it safely in geological sites such as deep saline formations or depleted oil and gas fields.

There are currently three types of capture technology: post-combustion, pre-combustion and oxyfuel CCS. The individual processes involved in CCS are not novel, but the full chain of technologies (capture, transport, and storage) has yet to be demonstrated together at commercial scale on a power station.

Source: Department of Energy and Climate Change
http://www.decc.gov.uk/en/content/cms/what_we_do/uk_supply/energy_mix/ccs/ccs.aspx

Appendix 3 Summary of Selby District Climate Change Strategy

The full document and more information about Climate Change can be found at:
http://www.selby.gov.uk/service_main.asp?menuid=2&pageid=661&id=1602

Location of New Development

1. Reduce the demand for travel by carbon fuelled vehicles by concentrating future growth in Selby the principal town, create new job opportunities and attract investment in order to make the three market towns and other settlements more self sufficient.

Sustainable Design of Development

2. Encourage developers to use more sustainable construction methods and standards and energy efficiencies may be achieved by influencing the layout of schemes and the design of individual buildings. Landscaping around development.

Renewable Energy

3. The Regional Spatial Strategy (RSS) establishes sub regional targets for installed grid-connected renewable energy sources, and we will ensure that the indicative local targets of included in the GOYH published changes to RSS (October 2007) are exceeded in Selby District by adopting a positive approach to wind turbine, hydro-electric and biomass proposals, provided there are no unacceptable impacts on local amenity or natural/historic assets.
4. We will develop policies through our LDF to promote renewable energy including targets to ensure large scale developments provide sufficient on-site renewable energy to reduce CO_2 emissions.
5. We will work with developers and partners to support and promote the provision of micro generation schemes in new developments, including turbines and photovoltaic cells (solar panels).

Flood Risk

6. We will ensure that new development is resilient to climate change by carrying out (and maintaining) a strategic flood risk assessment of the District, and using the information to inform planning decisions on the location of new development, including continuing to resist development in the functional floodplain.
7. Through our emerging LDF we will aim to locate development in places with the lowest risk of flooding. In locations where land at lower risk of flooding is unavailable the justification for development and the associated flood risks will be balanced with regeneration and other objectives.
8. We will promote the use of Sustainable Drainage Systems (SUDS) in new developments in order to minimize the risk of flooding. SUDS involve a range

of infiltration techniques (eg using permeable surfaces such as gravel, landscaped areas,) and attenuation techniques (eg ponds, flood storage reservoirs) to reduce the rate and volume of rainwater entering traditional piped drainage systems and watercourses.

9. We will encourage new housing and business developments that have sustainable drainage systems allowing for storm water storage, grey water systems and developer contributions to the development of the surface water and foul drainage systems in the district.