Communities and Local Government

eco-towns

Sustainability Appraisal and Habitats Regulations Assessment of the Eco-towns Programme

Leeds City Region

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Prepared by Scott Wilson for Communities and Local Government

Leeds City Region

November 2008

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The structure of the eco-towns SA/HRA publications

The Sustainability Appraisal (SA) and Habitats Regulations Assessment (HRA) of the draft Eco-towns Planning Policy Statement and Programme have been prepared by Scott Wilson Ltd for Communities and Local Government.

As the SA and HRA has been undertaken at a strategic level, it is necessarily broad in its assessment, conclusions, and recommendations. It takes a 'snapshot' of locations and proposals in September 2008, recognising that the proposals are continuing to be developed, and constitutes the first of a series of successive assessments that will be required as eco-town proposals are taken forward. Planning applications for eco-towns will also need to include a detailed Environmental Impact Assessment (EIA) and possibly HRA which may, in turn, also identify mitigation measures.

The SA and HRA should be read in four parts and an Annex:

I) The SA of the draft Eco-towns PPS

II) The SA/HRA of the Programme – Introduction

III) The SA/HRA of the Programme – Locational chapters

- Pennbury
- Middle Quinton
- Whitehill-Bordon
- Weston Otmoor and Cherwell
- Ford
- St Austell (China Clay Community)
- Rossington
- Hanley Grange and Cambridgeshire
- Marston
- North East Elsenham
- Rushcliffe
- Greater Norwich
- Curborough
- Manby
- Leeds City Region

IV) The SA/HRA of the Programme – Conclusions

Annex: Profile of European Sites

The sections above are accompanied by a Non-Technical Summary which summarises the findings of the SA and HRA of the draft Eco-towns PPS and Programme.

All documents are available on the Communities and Local Government website at www.communities.gov.uk/ecotowns

If you have comments on issues raised in the SA or HRA please respond as part of the consultation on the PPS, details of which are set out at www.communities.gov.uk/ecotowns. If you would like further information on any of the above please contact the Eco-Towns Team at Zone 2/G9, Eland House, London, SW1E 5DU or by email to: ecotowns@communities.gsi.gov.uk

1. Introduction

1.1 This chapter

1.1.1 This section sets out the draft Sustainability Appraisal and Habitats Regulations Assessment of the shortlisted eco-town location and associated development proposals in **Leeds City Region** and the possible locations at **Selby including the four proposals at Burn Airfield, Church Fenton, Gascoigne Wood, and Willow Green**. After further consideration the Leeds City Region partnership concluded that it did not consider a free-standing eco-town to be an appropriate solution to meeting housing needs in the city region and would prefer to pursue the eco-community concept on urban brownfield sites. This is being discussed further with Communities and Local Government at the present time.

1.1.2 As this Sustainability Appraisal (SA) and Habitats Regulations Assessment (HRA) has been undertaken at a strategic level, it is therefore necessarily broad in its assessment, conclusions, and recommendations. It takes a 'snapshot' of locations and proposals in September 2008 recognising that the proposals are continuing to be developed, and constitutes the first of a series of successive assessments that will be required as eco-town proposals are taken forward. Planning applications for eco-towns will also need to include a detailed Environmental Impact Assessment (EIA) and possibly HRA which may, in turn, also identify mitigation measures.

1.2 Eco-towns Planning Policy Statement

1.2.1 Communities and Local Government has published for consultation a Draft **Eco-towns Planning Policy Statement** (Draft PPS), accompanied by a Sustainability Appraisal and Habitats Regulations Assessment. According to the Draft PPS, eco-towns are new settlements which "*will have sustainability standards significantly above equivalent levels of development in existing towns and cities*"[1]. The eco-towns concept is designed to assist in meeting the twin challenges of providing additional housing and mitigating and adapting to climate change. The aim of the Draft PPS is to promote the development of "*exemplar projects that encourage and enable residents to live within environmental limits*" and "*to provide a showcase for sustainable living and allow Government, Business and communities to work together to develop greener, low carbon living*", thus providing inspiration for future development. With this in mind, the Draft PPS sets out a range of minimum standards which will be used to define an 'eco-town'. These cover a wide range of sustainability issues including biodiversity; climate change adaptation; employment; flood risk management; green infrastructure; homes; local services; transport; waste; water; and zero carbon.

[1] Communities and Local Government (2008). *Planning Policy Statement: Eco-Towns – Consultation document*

1.3 Eco-towns Programme

1.3.1 The **Eco-towns Programme** has been developed with the aim of getting exemplar eco-towns off the ground quickly with development underway by 2016. The Government has short listed a series of potential eco-town locations[2] – of which Leeds City Region is one – following an initial call for proposals. Each location has been subject to a Sustainability Appraisal and Habitats Regulations Assessment to assess its suitability for an eco-town. The findings of the appraisal for Leeds City Region and the locations at Burn Airfield, Church Fenton, Gascoigne Wood, and Willow Green are documented in this report.

1.4 SA and HRA

1.4.1 **Sustainability Appraisal (SA)** is generally not undertaken at the national level. In developing the Eco-towns PPS and the Eco-towns Programme, Communities and Local Government has decided to undertake SA, incorporating the requirements of the European Strategic Environmental Assessment Directive[3], at a level proportionate to the PPS and the Programme. Scott Wilson was commissioned to undertake the SA as well as a **Habitats Regulations Assessment (HRA)** of the Draft Eco-towns PPS and the Eco-towns Programme. SA seeks to identify and evaluate the impacts of a proposal on the economy, the community and the environment – the three dimensions of sustainable development – and suggest measures for improving the proposal's sustainability performance. HRA tests the impacts of a proposal on nature conservation sites of European importance – Special Areas of Conservation and Special Protection Areas, and, as a matter of Government policy, Ramsar sites – and is also a requirement under EU legislation[4]. An accompanying report sets out the SA and HRA of the Draft Eco-towns PPS.

1.5 SA methodology

1.5.1 Part I of this report describes the SA methodology in full. The SA for each of the shortlisted locations and any reasonable alternatives is based on a series of questions:

- What's the objective of the proposal?
- What's the policy context?

[2] Communities and Local Government (2008). Eco-towns: Living a greener future [online] available at: http://www.communities.gov.uk/publications/housing/ecotownsgreenerfuture (accessed 4 July 2008)

[3] Directive 2001/42/EC on the assessment of the effects of certain plans and Programmes on the environment (the 'SEA Directive') implemented through The Environmental Assessment of Plans and Programmes Regulations 2004

[4] Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (the 'Habitats Directive') implemented through The Conservation (Natural Habitats, &c.) (Amendment) Regulations 2007

- What are the key sustainability objectives we need to consider?
- What's the situation now? (including any existing problems)
- What will be the situation *without* the eco-town? (the 'business-as-usual' option)
- What will be the situation *with* the eco-town?
- How can we mitigate/enhance effects? (Scott Wilson's recommendations)
- How should we monitor sustainability impacts?

1.5.2 These questions correspond to the key requirements of the SEA Directive, as set out in Annex I to the Directive – see Table 1.

1.5.3 In undertaking the appraisal for each location, we drew on a wide range of information including the Scoping Report; the developer's proposal; discussions with the developer; discussions with the relevant local planning authority and, in some cases, the Government Office; the comments of the statutory consultees (the Environment Agency, Natural England etc.); and discussions with Communities and Local Government. We also visited each of the shortlisted locations.

Table 1: Meeting the requirements of the SEA Directive

Questions for each shortlisted location and associated development proposal	Key requirement of the SEA Directive (the 'environmental report' must include…)
What's the objective of the proposal?	*"**an outline of the contents, main objectives of the plan or Programme** and relationship with other relevant plans and Programmes"* (Annex I(a))
What's the policy context?	*"an outline of the contents, main objectives of the plan or Programme and **relationship with other relevant plans and Programmes**"* (Annex I(a))
What are the key sustainability objectives we need to consider?	*"**the environmental protection objectives, established at international, Community or Member State level, which are relevant to the plan or Programme** and the way those objectives and any environmental considerations have been taken into account during its preparation"* (Annex I(e))[5]

[5] Note that "*the way those objectives and any environmental considerations have been taken into account during its preparation*" is addressed in Section 3 for the Draft PPS and in each locational chapter

Table 1: Meeting the requirements of the SEA Directive *(continued)*

Questions for each shortlisted location and associated development proposal	Key requirement of the SEA Directive (the 'environmental report' must include…)
What's the situation now? (including any existing problems)	*"**the relevant aspects of the current state of the environment** and the likely evolution thereof without implementation of the plan or Programme"* (Annex 1(b)*)* *"**the environmental characteristics of areas likely to be significantly affected**"* (Annex I(c)) *"**any existing environmental problems which are relevant to the plan or Programme** including, in particular, those relating to any areas of a particular environmental importance, such as areas designated pursuant to Directives 79/409/EEC and 92/43/EEC"* [NB problems relating to European sites are addressed through the HRA] (Annex I(d)*)*
What will be the situation *without* the eco-town? (the 'business-as-usual' option)	*"the relevant aspects of the current state of the environment and **the likely evolution thereof without implementation of the plan or Programme**"* (Annex I(b))
What will be the situation with the eco-town?	*"**the likely significant effects (1) on the environment, including on issues such as biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationship between the above factors*** [our emphasis] ***(1) These effects should include secondary, cumulative, synergistic, short, medium and long-term permanent and temporary, positive and negative effects**"* (Annex I(f))
How can we mitigate / enhance effects? (Scott Wilson's recommendations)	*"**the measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment of implementing the plan or Programme**"* (Annex I(g))
How should we monitor sustainability impacts?	*"**a description of the measures envisaged concerning monitoring…**"* (Annex I(i))

1.5.4 It should be noted that the SA focused primarily on the merits of the proposed *location* as a suitable place to situate an eco-town since the location is fixed (notwithstanding the need to ultimately settle on a precise boundary for the development). However, we have also referred to the actual *development* proposed for that location (recognising that the current proposals for development at the various locations can obviously be modified and doubtless will be as time goes on). Reference to the development itself was considered important in gauging sustainability impacts particularly since the development could potentially mitigate impacts associated with the location and also make the most of any locational opportunities.

1.5.5 The aim of this SA was not to determine whether an eco-town location and proposal was either acceptable – ie 'sustainable' – or unacceptable – ie 'unsustainable'- and determine which locations progressed on this basis. The purpose of this SA was, rather, to explore the benefits and disbenefits associated with each of the locations and development proposals as an input to the Eco-towns Programme, and suggest ways in which their impact could be rendered more sustainable.

1.6 HRA methodology

1.6.1 Part II describes the HRA methodology in full. The requirement to undertake HRA arises from the Habitats Directive[6] which requires that plans and projects are subject to 'Appropriate Assessment' (AA) where they might have a significant effect on a European wildlife site. European sites include Special Areas of Conservation, Special Protection Areas and, as a matter of Government policy, Ramsar Sites. In order to establish whether or not an AA is necessary, plans and projects with potential effects must be 'screened' to determine the likelihood of their giving rise to significant effects – a so called HRA. All the proposed eco-town locations were screened and determined to have potential impacts on European sites. A full AA was therefore undertaken for each location and the assessment for Leeds City Region and the locations at Burn Airfield, Church Fenton, Gascoigne Wood, and Willow Green is documented in Section 3. The assessment involved identifying the European sites which could conceivably be impacted upon by development at the proposed location; establishing the environmental conditions needed to maintain the integrity of these sites (eg minimum air pollution or minimal recreational pressure); and assessing whether or not development at the location would adversely impact on these environmental conditions and therefore site integrity. Details of the ecological features of the European sites covered within the assessment, the reasons for their designation, their condition and the environmental conditions necessary to maintain their integrity are set out in the Annex, *Profile of European Sites*.

1.6.2 It should be noted that the objective of the HRA of the Eco-towns Programme was not to devise detailed site-specific measures for each of the current proposed eco-towns, but rather to use an appraisal of the current proposed Eco-towns as a tool to determine whether the policies and standards in the Draft PPS provide sufficient direction (in terms of both scope and detail) to enable eco-towns to deliver the detailed site-specific measures necessary to avoid or mitigate an adverse effect.

[6] Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora implemented in England through The Conservation (Natural Habitats &c. Regulations) 1994 (as amended)

2 Sustainability Appraisal

2.1 Introduction

2.1.1 This section sets out the **Sustainability Appraisal (SA)** of four possible eco-town locations and associated development proposal in the Leeds City Region.

2.1.2 The appraisal draws on data and information derived from:

- Office for National Statistics Census 2001
- Labour Force Survey (Office for National Statistics)
- Small Business Service, VAT Registrations
- the Summary Indices of Deprivation (Office of the Deputy Prime Minister, 2004)
- the Environment Agency
- Yorkshire and Humber Regional Spatial Strategy and Climate Change Study
- Sheffield Hallam University: Centre for Regional Economic and Social Research
- New Growth Point Status for the Leeds City Region: Expression of Interest (Leeds City Region Partnership, 2007)
- Leeds City Region Diagnostic (Northern Way, 2005)
- the Yorkshire and Humber Regional Spatial Strategy (Yorkshire and Humber Regional Assembly, 2008)
- Yorkshire and Humber Assembly (www.yhassembly.gov.uk)
- the Yorkshire and the Humber Regional Housing Strategy (2005-2011)
- Yorkshire and Humber Plan draft for Public consultation (2005)
- Selby District Local Plan (Selby District Council, 2005).

2.2 What's the objective of the proposal?

2.2.1 Four alternative sites have been proposed in the Leeds City Region and are the subject of this appraisal:

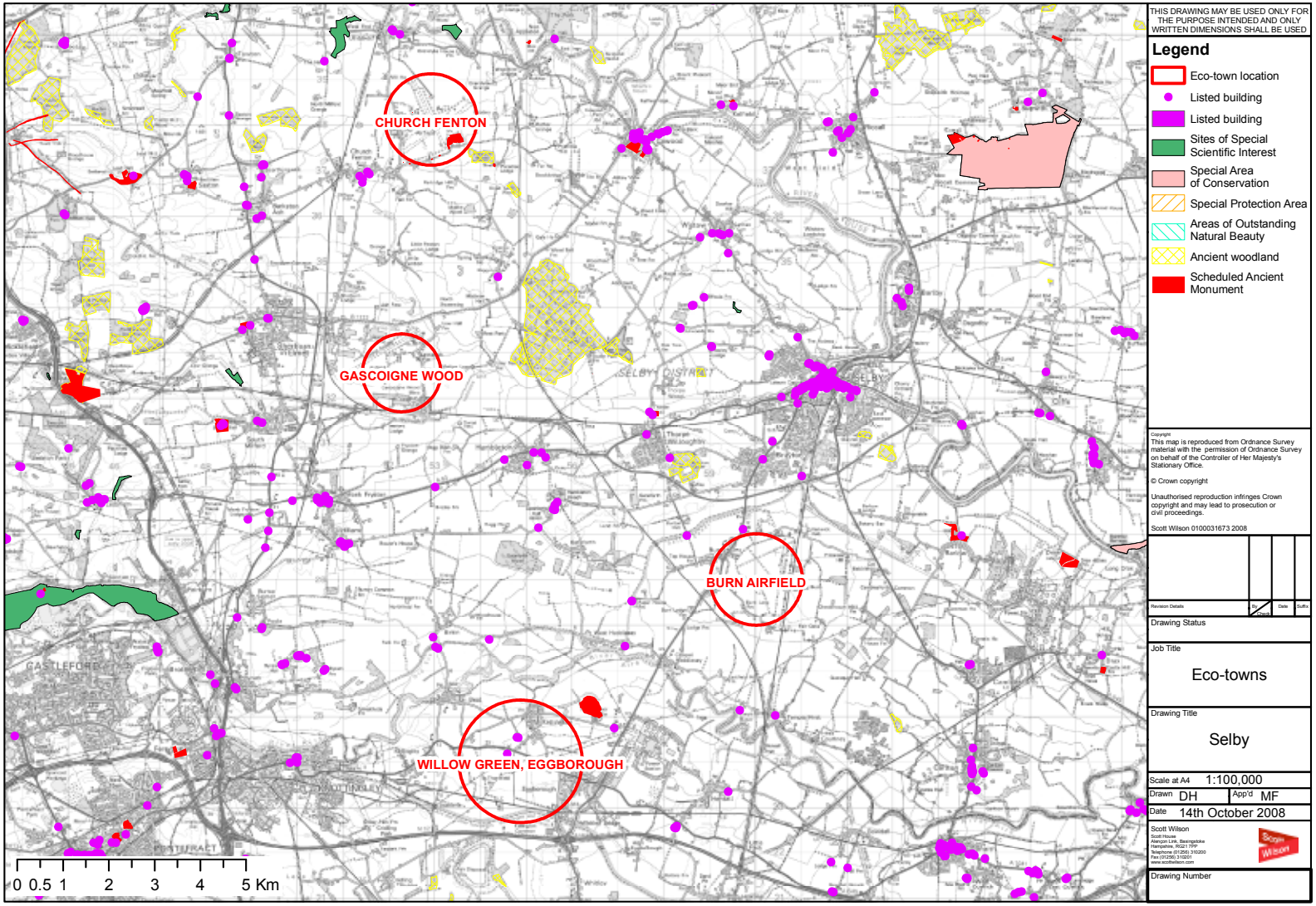
- Burn Airfield
- Church Fenton
- Gascoigne Wood
- Willow Green.

Have any further local alternatives been proposed?

2.2.2 In addition to the four Selby sites, proposals that have been put forward by the Leeds City Region authorities for urban eco settlements which would pilot eco-town standards on major urban brownfield sites in the Aire Valley Leeds, York, Bradford-Shipley canal corridor and North Kirklees. We have examined these proposals but note that they are rather different to the original eco-town concept of separate and distinct communities. All three proposals are within existing urban areas and the site in York actually occupies two distinct areas of land. Whilst these locations may offer the prospect of creating eco-developments which meet some of the eco-towns criteria, they do not in terms of location, size and separateness correspond to the eco-town model. Accordingly, they have not been reviewed further in this appraisal, but we understand that Communities and Local Government and Leeds City Region are continuing discussion of this approach with a view to selecting a comparable eco-exemplar scheme very shortly.

2.2.3 The Leeds City Region Partnership commissioned a study into the potential for an eco-town within the Leeds City Region. The study initially looked at the whole of the city region area and used socio-economic, housing market, regeneration and environmental criteria to identify the most appropriate area of search for an eco-town location within the area. The identified area for further investigation comprised Selby, York and parts of Leeds. The study then identified 14 potential sites within the area of search, including Darringfield and Micklefield (two of the original 57 proposals received by Communities and Local Government). In order to test the suitability of the 14 sites as potential eco-town locations, they were subject to various tests relating to strategic accessibility, regeneration impact, green belt, flooding and other issues. On this basis, four of the 14 sites were selected for further investigation, all of which were located in Selby. These four Selby locations are considered further in this appraisal.

Figure 1: Leeds eco-town location and environmental constraints



2.3 What's the policy context?

2.3.1 The national policy context in relation to housing provision, climate change and other relevant issues is set out in Part I. This section considers the policy context at regional level relevant to the Leeds City Region and the local level in Selby District.

2.3.2 Most of the Yorkshire and Humber regional housing growth is expected to occur in the Leeds City Region due to its strong economic growth. According to the Regional Spatial Strategy (RSS) the city region is likely to remain the most significant economic driver in Yorkshire and the Humber and will need to accommodate around 60 per cent of the region's job and household growth over the next 15-20 years. Recent economic growth resulted in an increase in the population of all of the region's local authorities. This has contributed to increasing the number of households and the consequent need for additional homes. The RSS states that the annual average net additions to the housing stock in Selby District where the proposals are located from 2004 - 2008 should be 390, and from 2008 - 2026 they should be 440.

2.3.3 The RSS goal is to create more sustainable patterns of development and reverse historic trends of dispersal away from the Regional Cities and Sub Regional Cities and Towns, whilst allowing an appropriate level of market and affordable housing in rural areas. Selby is identified as a Principal Town, expected to fulfil a regionally significant role as a service, transport and employment hub.

2.3.4 The Yorkshire and Humber Assembly is now getting ready to update the Regional Plan (2009 Update) and to review housing growth in the Region. The 2009 Regional Plan Update will test and explore the scale of growth, locations for growth and infrastructure needed to accommodate growth. Policy H2 in the RSS states that 'The Plan will be refined through a partial review to be completed by 2011 to ensure that longer term housing growth is planned and accommodated in the most sustainable way by identifying broad locations to meet longer term development needs, considering proposals for New Growth Points and Eco-towns and other evidence.

2.3.5 The Selby Local Plan (2005) states that provision will be made for land to accommodate about 620 dwellings per annum over the period January 2005 to December 2006 inclusive. Beyond this date the annual build rate from the Regional Spatial Strategy will apply, as detailed above.

2.3.6 The proposed distribution of new housing land concentrates development in and around the three market towns of Selby, Tadcaster and Sherburn in Elmet, and larger villages. Priority has been given to locations most capable of absorbing new development, close to existing and/or proposed sources of employment and where the maximum benefit from infrastructural improvements can be achieved.

2.4 What are the key sustainability objectives we need to consider?

2.4.1 Preliminary scoping work undertaken on behalf of Communities and Local Government identified a significant number of potentially relevant sustainability objectives to inform the appraisal. Taking into account this initial work, Scott Wilson has identified 12 core sustainability issues which will provide the basis for the SA of the locations and associated development proposals (no priority should be inferred from the ordering):

Environment

- biodiversity and green infrastructure
- climate change adaptation and flood risk
- climate change mitigation
- landscape and historic environment
- waste
- water resources and water quality.

Socio-economic

- community infrastructure
- community wellbeing
- decent and affordable homes
- transport and accessibility
- employment and economy.

Spatial issues

- spatial issues.

2.5 What's the situation now? (including any existing problems)

Biodiversity and green infrastructure

2.5.1 The western and northwestern areas of the Leeds City Region and adjoining Remoter Rural Areas include a number of important environmental designations. Part of the South Pennines SPA and SAC, part of the North Pennine Moors SAC and SPA, North Pennine Dales Meadows SAC, Denby Grange Colliery Ponds SAC, Skipworth Common SAC, Strensall Common SAC, and Kirk Deighton SAC, fall within the Leeds City Region.

2.5.2 The RSS for Yorkshire and Humber includes policies specifically aimed at enhancing green infrastructure and protecting green belts in the Leeds City Region. The City Region has some of the Yorkshire and Humber Region's lowest proportion of tree cover. As well as enhancing areas of Ancient Woodland, the RSS explores the possibility of developing an extensive community forest and more woodland areas close to the main urban areas and areas of social exclusion.

2.5.3 In Selby District, three Natural Areas have been identified; the Humberhead Levels, the Southern Magnesian Limestone Area and the Vale of York and Mowbray Natural Area. Natural areas contain a particular geology, wildlife, land use and cultural heritage which distinguish them from other natural areas in the UK.

2.5.4 There are currently 13 designated SSSIs in the Selby Plan area which represent some of the best remaining semi-natural habitats, including areas of grassland, woodland, heathland and geological importance. There are a total of 144 currently identified sites of importance for nature conservation in the District.

Climate change adaptation and flood risk

2.5.5 The Leeds City Region contains areas at high risk of flooding due to its characteristic low lying topography with extensive river systems. This is true for the low lying eastern areas around York and Selby as well as urban centres in the Pennines Fringe area. The Aire Valley between Leeds and Bradford and the main urban areas in Calderdale are especially vulnerable.[7]

2.5.6 Projected climate change, with rising sea levels and predictions for more frequent and extreme weather events, has led the Regional Spatial Strategy to prioritise climate change adaptation measures for flood alleviation, such as tree planting along the course of river systems.

Climate change mitigation

2.5.7 The Yorkshire and Humber region contributes 12.5 per cent of the total UK greenhouse gas emissions. The power generation industry is the biggest cause of emissions, due to the high proportion of UK electricity generated in the region. In 2001 this sector contributed 58 per cent of the total regional greenhouse gas emissions. Emissions are predicted to increase over the period to 2010.[8]

2.5.8 The fastest growing and second highest source of greenhouse gas emissions is the transport sector, particularly the road transport and aviation sectors.

[7] www.yhassembly.gov.uk/Our%20Work/Regional%20Planning/Regional%20Spatial%20Strategy/

[8] www.yhassembly.gov.uk/dnlds/RSS%20and%20Climate%20Change%20Final%20research%20report.pdf

In 2001, road transport contributed almost 13 per cent of the region's greenhouse gas emissions. Other transport (excluding international aviation) contributed approximately 0.5 per cent.

2.5.9 The third highest source of emissions in the region is the domestic sector, contributing around 10 per cent of total greenhouse gas emissions. This contribution is expected to increase.

Landscape and historic environment

2.5.10 Leeds City Region includes most of the Vale of York and some of the Humberhead levels landscape areas. Both areas are predominantly low lying with extensive river systems with areas of significant flood risk. Broadly west of the A1, the landscape changes and is characterised by more undulating topography and a landscape of valleys, woodlands and fields. This area is made up of the northern extent of the Nottinghamshire, Derbyshire and Yorkshire Coalfield area and the Magnesium Limestone Ridge Landscape Character Areas[9].

2.5.11 These landscapes types, the river systems and the availability of mineral resources are the key to understanding the economic and social history of the region. This history has left a rich variety of urban and rural habitats, ranging from industrial and post industrial landscapes, canals, a range of types of urban areas and habitats; ancient woodlands and hedgerows and prehistoric landscapes, especially in the Magnesium Limestone Ridge area. The legacy from the pre industrial age and perhaps above all, the civic buildings and urban structure from the nineteenth century is particularly important.

2.5.12 A local landscape assessment of Selby District identified 10 local landscape character areas. There are two landscape features designated as locally important: Hambleton Hough and Brayton Barff located to the south-west of Selby. Their significance is attributable to the outcropping of Triassic sandstone above the glacial till of the surrounding area.

2.5.13 The Selby District contains a number of historic parks and gardens that make a significant contribution to the landscape quality and character and appearance of the countryside. Nun Appleton Hall is included within the register of Parks and Gardens of National Historic Interest. Towton Battlefield is on the register of Historic Battlefields.

2.5.14 The Selby Plan area contains many buildings of special architectural and historic interest. The majority reflect the agricultural and ecclesiastical history of the area, although there are some examples of more unusual building types, such as Hazlewood Castle, Steeton Hall Gatehouse, Tadcaster Viaduct

[9] The Yorkshire And Humber Plan_Draft For Public Consultation_December 2005

and the group of Victorian and Edwardian warehouses along the Ouse frontage at Selby. There are over 610 listed buildings and 52 scheduled monuments in the Plan area.

Waste

2.5.15 According to 2003 figures, the amount of waste being produced in the Yorkshire and Humber region was rising at a rate of around 3 per cent a year. Municipal waste volumes were projected at twice the 2003 volumes for 2020[10]. A 2007 monitoring report shows a mixed picture, wherein an increase in waste generation has been balanced by a decrease in the amount of waste sent to landfills, as well as increased recycling rates[11].

2.5.16 Selby District lies within North Yorkshire Waste Authority. In North Yorkshire the annual average rate of waste disposal to landfill sites is some 1.8 million tonnes. There is currently only limited re-use and recycling of wastes in the County[12]. The Waste Local Plan recognises that the new targets to divert waste from landfill will result in a need to develop more waste facilities.

2.5.17 The York and North Yorkshire Waste Partnership have set the following targets relating to waste minimisation:

- to contain average household waste arisings so that residents of the Partnership area generate less per head than the average for Shire counties by 2008, and amongst the lowest 25 per cent of these by 2013
- to reduce annual average growth per head to 0 per cent by 2008.

Water resources and water quality

2.5.18 The Yorkshire Water Region generally coincides with the governmental region of Yorkshire and the Humber, which had a population of 5,064,000 in 2004. Over the next 25 years or so, rising population, new housing, shrinking household sizes and non-industrial, non-agricultural business growth are likely to lead to an increase in demand for water. However demand from agriculture and industry is predicted to fall over this period, and the net change is expected to be an overall reduction in demand. Regardless, changing weather patterns will inevitably lead to a slight shortfall in the supply-demand balance for water.

2.5.19 Yorkshire Water maintains a water grid to ensure sufficient water is available to supply its customers all year round. The infrastructure includes 120 reservoirs and more than seven hundred water and sewage treatment works (STWs). In addition to natural watercourses, Yorkshire Water utilises some 40,000 miles of water mains and sewers. Water resources in the region are

[10] Yorkshire and Humber Assembly, *Let's take it from the tip: Yorkshire and Humber Regional Waste Strategy*, 2003

[11] www.yhassembly.gov.uk/dnlds/AMR%2007.pdf

[12] North Yorkshire Waste Local Plan (2006)

generally good. Nevertheless, there are also periods when there is less water easily available for use. During these periods water stored in natural aquifers or artificial reservoirs is valuable[13].

2.5.20 In 2006, 91 per cent of the river extent in the Yorkshire and Humber region was of good or fair chemical water quality, and 92 per cent was good or fair in terms of biological quality[14]. A few of the region's areas, mainly in the centre and east, are nitrate vulnerable. These areas are especially vulnerable to diffuse pollution from agriculture.

2.5.21 The management of water resources in the Selby area is set out in the Aire and Calder Catchment Abstraction Management Strategy. The Sherwood Sandstone aquifer in the Selby area has been subject to high levels of abstraction and groundwater levels have been decreasing steadily. The aquifer is now closed to further abstractions[15]. The Sherwood Sandstone underlying the Selby area is particularly sensitive to contamination due to the area of exposed aquifer. It is important that aquifers within sensitive areas are protected from potentially polluting land uses.

2.5.22 The River Wharfe and River Aire have tidal reaches within Selby District, and the salinity of these waters is not suitable for abstraction. The water in Selby Canal is not drinking water quality.

Community infrastructure

2.5.23 Selby is the principal shopping centre in the District catering primarily for convenience shopping. It serves an extensive rural hinterland stretching from Riccall in the north to the District boundary in the south, and from Sherburn In Elmet in the west to the District boundary in the east. The town has a more limited attraction for durable goods, but does benefit from weekly Monday and Saturday markets. Selby provides a wide range of community facilities including a library, police station, hospital, fire station, ambulance station, community centre and four doctors' surgeries. There are five primary schools in Selby town, two of which offer nursery provision. The town is also served by two secondary schools, namely Selby High School and Brayton High School. Selby College caters for further education.

Community wellbeing

2.5.24 According to the 2001 Census, ethnic diversity in Yorkshire and the Humber is less than the British average (94 per cent of residents of the region are White British compared with 91 per cent for England).

[13] www.environment-agency.gov.uk

[14] Yorkshire and Humber Regional Spatial Strategy

[15] Selby Local Plan (2005)

2.5.25 Census. Since 1991 the region has begun to experience more significant growth of ethnic or minority groups. This trend is expected to result in some increase in the population diversity in the region. In 2001, 4.7 per cent of people living in Yorkshire and the Humber were born abroad, up from 3.7 per cent in 1991.

2.5.26 The Summary Indices of Deprivation 2004 show that 5 of the 10 districts in the Leeds City Region (Bradford, Barnsley, Wakefield, Kirklees and Leeds) are amongst the 25 per cent most deprived districts in England. Calderdale is within the 50 per cent most deprived. York and Selby are amongst the 50 per cent least deprived and Craven and Harrogate are within the 25 per cent least deprived Districts.

Decent and affordable homes

2.5.27 There is a predictably wide range of house prices across the city region. This varies from an average property price (2006) of £119k in Barnsley to £247k in Harrogate[16]. Harrogate and Craven having the highest prices; York, Selby and Leeds are the next most expensive areas; then a group comprising Bradford, Calderdale, Kirklees and Wakefield; and, in the least expensive category for all property types, Barnsley.

2.5.28 Property prices have conventionally been seen as 'affordable' if they are around 3-3.5 times household income. According to this, in 2004, half the areas in the city region were within this band (Barnsley, Calderdale, Kirklees, Selby and Wakefield) and half had a price to income ratio higher than 3.5 (Bradford, Craven, Harrogate, Leeds and York).

2.5.29 There is growing evidence of an increase in the demand for social housing as a result of changing community needs, such as households seeking an alternative to home ownership and asylum seekers. Waiting lists have therefore risen substantially in most parts of the city region in recent years, especially in Bradford, as a result of increasing demand from those minority ethnic communities that have tended to seek alternative housing tenures in the past. This has been coupled with rising homelessness in recent years as affordable housing deficits and increasing demand drive poorer groups out of the market. Where private sector housing does cater for less affluent households it is often of a poor quality.

2.5.30 The average property price for Selby District in June 2007 was £202,300. This is a 54 per cent increase from 2003[17]. The average affordability ratio for Selby District is 5.1, which means that an individual would need a mortgage over five times their gross salary to buy an average priced property.

[16] Improving the Residential Offer in Leeds City Region (Sheffield Hallam University, October 2006)

[17] Selby District Local Development Framework Core Strategy Background Paper No 2 Affordable Housing (2007)

2.5.31 The Selby District Local Plan recognises that the lack of affordable private housing for both sale and rent, particularly for first-time buyers, is a particular area of concern. Several factors have combined to exacerbate the problem in the Plan area, notably the influence of York and Leeds on the housing market, and the reduction in Council housing as tenants continue to exercise their right to buy. In some villages the number of Council houses has dwindled to single figures.

Transport and accessibility

2.5.32 The Leeds City region is at the heart of the nation's road transport network, with the M1 to the South, A1(M) to the North and the M62 linking Manchester and Merseyside to Hull. Placed between Edinburgh and London, and Ireland and Continental Europe, Leeds is crossed by some of the country's busiest roads, making it an easily accessible hub. However, there are congestion issues, particularly into and around Leeds.

2.5.33 Leeds and York are key hubs on the national rail network. These cities, as well as Wakefield, have stations on the East Coast mainline linking London with much of the North and Scotland. The Trans Pennine route is an extremely important in linking Manchester, Liverpool Leeds and Sheffield and in providing access to Manchester Airport.

2.5.34 Leeds-Bradford Airport forms a hub for an array of domestic and international flights, attracting tourists, business travellers and freight. The city region also benefits from the new airport at Finningley near Doncaster.

2.5.35 The 2001 Census indicates that 30 per cent of households in Yorkshire and the Humber have no car compared to 27 per cent nationally. Travel to work data indicates that the region and the country have a similar share of residents working from home, 8 per cent and 9 per cent respectively. The region has marginally higher numbers of commuters travelling to work by private motor vehicle (56 per cent compared to 55 per cent nationally). In addition, a slightly higher percentage of people walk to work locally – 11 per cent compared to 10 per cent nationally.

2.5.36 Census data, ongoing surveys and passenger counts confirm that buses are an important for travel to work in the city region, particularly for shorter, more local journeys. However, without more priority measures, worsening road congestion will affect the attractiveness of bus services to the main economic centres. This could affect the willingness of people to travel to find jobs, or more productive employment[18].

2.5.37 Selby is located centrally in the District, approximately 11 miles south of York. The town is located at the crossing point of the A19 and A63(T) on the river Ouse, and today still has port facilities on the river. There are direct rail links to Manchester Airport, Leeds, York, Doncaster and Hull.

[18] www.leeds.gov.uk/leedscityregion/docs/Appendix4_Transport_vision.pdf

2.5.38 Selby town is the focal point for public transport in the District. Several bus companies operate services between Selby and York, Goole, Doncaster, Leeds and surrounding villages. The existing rail service gives good access to various parts of the region including Leeds, Hull and York together with a more limited service to Doncaster.

Employment and economy

2.5.39 The Leeds city-region has a total population of over two and a half million people. The economy in the-region has changed in the last 20 years with a rapid growth in the level of service sector employees. The financial and business services sector employs around 234,000 people in the city-region, accounting for a quarter of the area's gross value added. Of these jobs, almost half are based in Leeds which has seen a 35 per cent expansion of jobs in finance and business services. In 2001, 88,000 commuters travelled into Leeds to work each day and around 48,000 of its residents commuted to jobs outside its boundaries (Census, 2001).

2.5.40 The average weekly household income in Leeds City is at present above the national average (£489.60 compared with £455 nationally). The average annual income in the wider Yorkshire and Humber region was £25,961, which is below the UK average income of £29,331.

2.5.41 Educational performance, in areas of the city region, remains lower than the national average. Although performance is a little better than average at NVQ level 4, it is poorer at lower skill levels. The city region has a higher than average level of people who aren't in employment, particularly in inner urban and some rural areas.

2.5.42 The Yorkshire and Humber economy has experienced solid levels of growth in the past ten years. The regional economy makes-up around 7.3 per cent of the UK total. The Gross Value Added rate for the region has increased by 26.6 per cent since 1998. Since 2001, GDP in the region has grown by 11.9 per cent, compared to 8.6 per cent for the UK. The employment rate in Yorkshire and Humber is currently 74.4 per cent and the England average is 75.1 per cent.

2.5.43 The Yorkshire and Humber region had 32 new business registrations per 1,000 population aged 16+ in 2003.The average for England is around 40 registrations.

2.5.44 Bradford and Leeds have child poverty rates above the regional and national average. There are also concentrations of high unemployment, notably in three wards in Bradford with over 12 per cent unemployed. Harrogate has some of the lowest unemployment rates (1.2 per cent) in the region together with the highest house prices and average wages.

2.5.45 Most employment in Selby District is concentrated in Selby and adjacent Parishes: Sherburn in Elmet, Tadcaster and Eggborough/Whitley Bridge, with isolated pockets at rural locations, including six coal mines and two electricity generating power stations. Although significant out-commuting occurs to surrounding employment centres such as Leeds and York, there is expected to be significant growth in the number of people seeking local employment.

2.5.46 Selby town has a number of locally important industries including grain milling, chemical production and paper products.

Spatial Issues

2.5.47 Leeds City Region is at the centre of the renaissance of the North of England, and is now one of the largest financial and business services centre outside London. Furthermore, it is now performing a national role in some sub-sectors[19].

2.6 What will be the situation *without* the eco-town? (the 'business-as-usual' option)

2.6.1 The 'business-as-usual' scenario is considered with respect to Leeds City Region as a whole, with further consideration of Selby district. In the absence of an eco-town proposal, piecemeal development is likely to increase in an attempt to meet the growing requirements of business infrastructure and support in the city region. It is likely that there will also be pressure to release land from the Green Belt.

2.6.2 Regeneration may face challenges from speculative housing development in urban extensions. Significant development in some of the smaller market towns and larger villages may serve to alter their character.

2.7 What will be the situation with the eco-town?

Introduction

2.7.1 In this section we consider the sustainability of the four proposed locations and developments at Selby within, **Leeds City Region.** The discussion is structured around the sustainability issues derived from the earlier scoping work.

2.7.2 The appraisal draws on information derived from:

- the scoping studies
- the comments of statutory agencies (eg English Heritage, the Environment Agency, Natural England, the Department of Transport)
- discussions with Communities and Local Government.

[19] New Growth point Status for Leeds City Region, Leeds City Region Partnership.

Biodiversity and green infrastructure

2.7.3 There are valuable green assets and therefore potentially significant biodiversity constraints within the Leeds City Region. Selby has a large number of nature conservation sites and high quality semi-natural habitats that need to be taken into consideration.

2.7.4 None of the four proposed eco-towns in Selby District are within or adjacent to an SSSI. The proposed locations would need to be surveyed to ascertain whether there are any priority habitats or species on the sites.

Climate change adaptation and flood risk

2.7.5 There are substantial areas of low lying land within Leeds City Region that are vulnerable to flooding. The majority of Burn Airfield is within Flood Zone 3 which presents an unsustainable flood risk. Small parts of the Church Fenton site lie within Flood Zones 2 and 3, although these areas could be avoided.

2.7.6 The Gascoigne Woods proposal lies within Flood Zones 1, 2 and 3, although only part of the airfield to the north of the site lies within Flood Zone 3, and this area could either be avoided or used for amenity land.

2.7.7 While the majority of the Willow Green site lies within flood risk zone 1, there are small areas that lie within Flood Zone 3, and these locations should be used for green space and amenity land.

Climate change mitigation

2.7.8 Detailed proposals for the eco-town have not been developed and it is therefore not possible to analyse the proposals to address climate change mitigation.

Landscape and historic environment

2.7.9 Burn Airfield, Gascoigne Wood and Willow Green do not have listed buildings, scheduled ancient monuments or conservation areas within or adjacent to the sites.

2.7.10 Church Fenton has several scheduled monuments located on and adjacent to the site. Any proposal for the site would need to be accompanied by a heritage and archaeological assessment, to avoid or minimise any impact on either the monuments or their setting.

2.7.11 Leeds City Region has diverse landscapes and a rich historic environment. Any proposals would need to reflect the landscape character of the surrounding area, whether it is in an urban or rural location, and minimise any impacts on protected landscapes and built heritage. The 10 local

landscape character areas in Selby would also need to be given due consideration to ensure any proposals reflected that characteristics of these areas.

2.7.12 Selby has a large number of listed building and scheduled monuments that could be affected by a proposal. A detailed landscape and visual and assessment should be prepared for any shortlisted site, and a detailed built heritage assessment would be required if there were any listed buildings on or adjacent to the site.

Waste

2.7.13 The four eco-town proposals do not contain detailed information on waste management and minimisation. If detailed proposal for any of the locations are developed, they should include Site Waste Management Plans to ensure waste production is minimised during construction and operation and work towards meeting the York and North Yorkshire Waste Partnership waste minimisation targets.

Water resources and water quality

2.7.14 The water supply options for all four ecotown locations are constrained because they are located over the Sherwood Sandstone Aquifer which is closed to further abstractions. The salinity of the nearest watercourses renders them unsuitable for most abstraction purposes and Selby Canal is not drinking water quality.

2.7.15 At Burn Airfield there are no watercourses in the immediate area that are large enough to accept a discharge from a suitably large STWs.

2.7.16 In Church Fenton the sewerage and sewage treatment facilities serving the remaining operational section of the airbase are currently operated privately by the MOD. This works is unlikely to have sufficient capacity to serve the eco-town.

2.7.17 At Willow Green in Eggborough, a capital scheme has been completed at the sewage treatment works and this has provided capacity for domestic sewage flows from the development envisaged in the Selby Local Plan, although this may not be sufficient for an ecotown.

2.7.18 At Gascoigne Wood the former mine would have had a small scale foul sewage provision. South Milford is served by public foul and surface water sewer systems. There is spare capacity with regard to sewage treatment and water supply although this is 1.4 miles from Gascoigne Wood.

Community infrastructure

2.7.19 It is anticipated that any eco-town proposal would incorporate the appropriate level of services and infrastructure to ensure that it did not place pressure on, or equally undermine, any service provision in the surrounding area. A detailed study of existing provision and anticipated demand from the eco-town would need to be provided to support the proposal.

2.7.20 Close to Burn Airfield Brayton has a village hall, post office, garage, two public houses, and several shops. Brayton Parish also contains an infant school, two primary schools and a high school.

2.7.21 Church Fenton has a good range of services and facilities, including a primary school.

2.7.22 Close to Gascoigne Wood, South Milford provides a general store and post office, restaurant, garage and car showroom and hairdressers. There are three public houses, two village halls, a doctor's surgery and a primary school.

2.7.23 Close to Willow Green, Eggborough has a newsagent/general store, a second newsagent, a builders' merchant/DIY store, a hairdressers, a fish and chip shop and a petrol station. The village also supports a village hall, two public houses and a primary school.

Community wellbeing

2.7.24 An eco-town in Leeds City Region has the potential to relocate some of the existing resident population away from areas that are vulnerable to flood risk, and provide accommodation in a sustainable location for those moving into the area.

2.7.25 Although the ethnic diversity in the City Region is low, consideration will need to be given to the needs of ethnic groups to ensure they have the opportunity to benefit from an eco-town. This is of particular importance in view of the potential for an ecotown to meet a proportion of the demand for social housing. A detailed ecotown proposal would need to give due consideration to appropriate measures to support the integration of an ecotown with the surrounding community.

2.7.26 None of the four proposed eco-town locations in Selby District are within Air Quality Management Areas, although Willow Green is close to Eggborough power station.

Decent and affordable homes

2.7.27 An ecotown in Leeds City Region has significant potential to meet some of the shortage in affordable housing, which is constraining the economic

growth in the region and contributing to rising homelessness. Areas such as Bradford, Craven, Harrogate, Leeds and York, would experience greater benefits due the greater affordability problems in those areas. An ecotown can also be expected to provide decent affordable homes that are a realistic alternative to the poor quality affordable properties within the private sector.

2.7.28 An eco-town in Selby District would help address the severe shortage of affordable housing in the area and could also help meet some of the unmet demand for social housing. Although the proposals do not set out the level of affordable housing provision, Selby District Council can be expected to require at least 50 per cent affordable housing, in accordance with the Local Development Framework (LDF)[20].

Transport and accessibility

2.7.29 An eco-town at Burn Airfield would benefit from proximity to Selby train station, which is located 3.2 miles from Burn and has services to Manchester Airport, Leeds, York, Doncaster and Hull. Burn is also 1 mile from Brayton, which is served by a number of bus services with frequent daily trips to Selby and Doncaster as well as to Carlton, Whitley and points in between.

2.7.30 An eco-town in Church Fenton would increase patronage of the regular bus services to Tadcaster, Pontefract and South Milford. Residents would also benefit from the regular rail service to York and Selby.

2.7.31 Gascoigne Wood is 1.4 miles from South Milford, which is served by regular bus services to Selby, Leeds, Tadcaster and York and less regular services to Pontefract and Castleford. South Milford is also served by a railway station which provides services to Selby, Leeds and Hull. Services to Sheffield, Scarborough, York and Selby are available from Sherburn in Elmet station.

2.7.32 An eco-town at Willow Green in Eggborough would benefit from the existing frequent bus services to Selby, Doncaster and Knottingley. Eggborough village is also served by Whitley Station on the Leeds to Goole line which has five trains daily.

Employment and economy

2.7.33 The four eco-town proposals for Selby District do not provide information on the anticipated level of on site employment provision, or any measures to support home working. A detailed ecotown proposal would benefit from measures that reduce the need to travel, such as home/work units and on site employment. An ecotown can also be expected to contribute to the existing employment market, and opportunities in the surrounding area have been identified for each of the proposed locations.

[20] Selby District Local Development Framework, Core Strategy Background Paper No 2, Affordable Housing (2007)

2.7.34 An eco-town in Burn would benefit from local employment opportunities in Brayton, centred on small family businesses in the service sector, and a wide range of employment opportunities are available in Selby and Selby Business Park (which is situated in Brayton Parish).

2.7.35 The main employment opportunities near Church Fenton Airbase are in Sherburn in Elmet. The principal concentration of employment is found to the east of the York-Sheffield railway, comprising the established Moor Lane Trading Estate, and the modern Sherburn Enterprise Park which extends across part of Sherburn Airfield. Companies accommodated within the employment areas include Eurospace Furniture, Supercook, Bibbys, Linpac Plastics, Wellstar and a Kwik Save Supermarkets Distribution Centre. To the north of the B1222 British Gypsum have a large factory. Additional employment is found in local services.

2.7.36 The principal employment opportunities near Gascoigne Wood are found in Sherburn in Elmet, Castleford or Leeds.

2.7.37 An eco-town at Willow Green would benefit from employment opportunities at Eggborough Power Station, the Saint Gobain float glass factory and Kellingley Colliery. A number of local industries and businesses are established in Eggborough village including light engineering, and haulage. The principal concentrations are found at the Northside Industrial Estate between the Knottingley to Goole canal and the railway. Additional opportunities are found in small factory units on the Maltings Estate (within Kellington Parish).

Spatial issues

2.7.38 The airbase at Church Fenton itself represents a substantial brownfield site. However, its location, remote from existing major roads and service centres and facilities makes its use for a mainstream housing or intensive industrial development unsustainable from a traffic and travel aspect. The current proximity of the operational airfield also creates uncertainty as to the acceptability of neighbouring uses, both from security and potential noise aspect.

2.8 How can we mitigate/enhance effects?

2.8.1 The **key strengths of Burn Airfield** from a sustainability viewpoint are:

- no SSSIs other protected sites or heritage assets within or adjacent to the site
- located close to employment markets in Selby
- proximity to strategic road transport network
- area of previously developed land.

2.8.2 The **key weaknesses of Burn Airfield** from a sustainability viewpoint are that:

- most of the site is within Flood Risk Zone 3
- lack of suitably large watercourses for wastewater discharge
- area of grade 2 agricultural land within site
- nearest train station is 3.2 miles from site, in Selby
- water supply constraints due to abstraction restrictions and salinity of watercourses.

2.8.3 The **key strengths of Church Fenton** from a sustainability viewpoint are:

- area of previously developed land
- no SSSI's or other protected sites within or adjacent to the site
- the majority of the site lies outside Flood Risk Zones 3
- good proximity to train station.

2.8.4 The **key weaknesses of Church Fenton** from a sustainability viewpoint are:

- adjacent to operational airbase, with associated noise issues
- poor proximity to the strategic road network and existing employment markets
- Scheduled Ancient Monuments located within and adjacent to the site
- insufficient sewage treatment capacity in Church Fenton
- water supply constraints due to abstraction restrictions and salinity of watercourses.

2.8.5 The **key strengths of Gascoigne Wood** from a sustainability viewpoint are:

- no SSSIs, other protected sites or heritage assets within or adjacent to the site
- majority of site lies outside Flood Risk Zones 1, 2 and 3
- opportunity to remediate contaminated land
- reasonable proximity to strategic road network and train station.

2.8.6 The **key weaknesses of Gascoigne Wood** from a sustainability viewpoint are that:

- foul sewage facilities would need to be provided
- poor proximity to existing employment markets
- water supply constraints due to abstraction restrictions and salinity of watercourses.

2.8.7 The **key strengths of Willow Green** from a sustainability viewpoint are:

- good proximity to strategic road network and train station
- majority of site lies outside Flood Risk Zones 1, 2 and 3
- no SSSIs, other protected sites or heritage assets within or adjacent to the site
- reasonably near to existing employment markets.

2.8.8 The **key weaknesses of Willow Green** from a sustainability viewpoint are:

- water supply constraints due to abstraction restrictions and salinity of watercourses.

2.8.9 The sustainability of the four proposals for an eco-town in Selby is further assessed in greater detail in Table 2. The table uses a series of 23 indicators, derived from the appraisal criteria, to provide an objective summary of the strengths and weakness of the location from a sustainability viewpoint. These have then been assessed as positive (green), negative (red), neutral (orange) or not known or not material (blank). On this basis, the proposals for Leeds City Region have been assessed as:

Burn Airfield: C – Location only likely to be suitable for an eco-town with substantial and exceptional innovation

Church Fenton: B – Location might be suitable for an eco-town subject to meeting specific planning and design objectives.

Gascoigne Wood: B – Location might be suitable for an eco-town subject to meeting specific planning and design objectives.

Willow Green: B – Location might be suitable for an eco-town subject to meeting specific planning and design objectives.

Table: 2 Sustainability of the Leeds City Region Selby proposals as eco-town locations

SA Issue	Site Specific Issues	Indicators	Burn Airfield Comment	Church Fenton Comment	Gascoigne Wood Comment	Willow Green Comment
Biodiversity and green infrastructure	Conserve and enhance biodiversity Protect and enhance priority habitats and species Increase and enhance green infrastructure	SSSIs within or adjacent to the site	No	No	No	No
		Presence of priority habitats/species	Not known	Not known	Not known	Not known
Climate change adaptation and flood risk	Avoid development in areas of high flood risk Avoid exacerbating flooding in the vicinity of the site	Area of flood risk 3 within site	Yes - most of the site is within Flood Zone 3	Yes - some of site lies within Flood Zone 2 and 3	Yes - parts of airfield lie within Zone 3	Yes - small area within Flood Zone 3
		Area of flood risk 3 adjacent to the site	Yes - Flood 3 Zones adjacent to the site	Yes - Flood 3 Zones adjacent to the site	Yes - Flood 3 Zones adjacent to the site	Yes - Flood 3 Zones adjacent to the site
Climate change mitigation	Maximise use of renewable energy	Potential of the site for renewable energy	Not known	Not known	Not known – operational airbase may constrain options e.g. wind turbines	Not known
Landscape and historic environment	Protect and enhance the landscape Protect and enhance heritage assets and their settings	Designated landscapes across or adjacent to the site	No	No	No	No
		Listed buildings/ancient monuments within or adjacent to the site	No	Yes - scheduled monument within the site	No	No

Table: 2 Sustainability of the Leeds City Region Selby proposals as eco-town locations *(continued)*

SA Issue	Site Specific Issues	Indicators	Burn Airfield Comment	Church Fenton Comment	Gascoigne Wood Comment	Willow Green Comment
Water resources and water quality	Minimise impacts on water resources and water quality	Water supply status	Potential constraint	Potential constraint	Potential constraint	Potential constraint
		STW capacity	Potential constraint	Potential constraint	Potential constraint	Potential constraint
Community infrastructure / wellbeing	Utilise existing infrastructure within its capacity	Will contribute to retaining character of higher order centre	Not known	Not known	Not known	Not known
	Complement broader planning policies/objectives	Will facilitate regeneration	Not known	Not known	Not known	Not known
		Within or adjacent to Air Quality management Area (AQMA)	No	No	No	No
Decent and affordable homes	Meet housing need	Demand for housing	Yes	Yes	Yes	Yes
		Demand for affordable housing	Yes - lack of affordable housing is a key issue in the District	Yes - lack of affordable housing is a key issue in the District	Yes - lack of affordable housing is a key issue in the District	Yes - lack of affordable housing is a key issue in the District

Table: 2 Sustainability of the Leeds City Region Selby proposals as eco-town locations *(continued)*

SA Issue	Site Specific Issues	Indicators	Burn Airfield Comment	Church Fenton Comment	Gascoigne Wood Comment	Willow Green Comment
Transport and accessibility	Provide easy access to a higher order centre Provide easy access to a railway station Discourage long distance commuting Proximity to area of poor air quality	Proximity to higher order centre (distance)	Selby c.5km (3.2 miles) York c.25.5km (16 miles)	York c.22.5km 14 miles) Leeds c.29km (18 miles)	Leeds c.22.5km (14 miles) York c.25.5km (16 miles)	Selby c.9.5km (6 miles) York and leeds c.34km (21 miles)
		Proximity to railway station (distance)	Selby c.5km (3.2 miles)	Church Fenton c.800m	South Milford c.2.2km (1.4 miles)	Whitley Bridge c.500m
		Proximity to existing sources of employment (scale/ distance)	Selby c.5km (3.2 miles) York c.25.5km (16 miles) Leeds c.45km (28 miles)	Sherburn In Elmet c.3km (2 miles) York c.22.5km 14 miles) Leeds c.29km (18 miles)	Sherburn In Elmet c.3km (2 miles) Leeds c.22.5km (14 miles) York c.25.5km (16 miles)	Available in Eggborough Selby c.9.5km (6 miles) York and Leeds c.34km (21 miles)
		Proximity to motorway/ strategic road network (distance)	A19 c.800m M62 c.8km (5 miles)	M1 c.13km (8 miles) A162 c.3km (2 miles)	M1 c.4km (2.5 miles) A162 c.1.5km (1 mile)	M62, A645 and A19 c.1.5km (1 mile)

Table: 2 Sustainability of the Leeds City Region Selby proposals as eco-town locations *(continued)*

SA Issue	Site Specific Issues	Indicators	Burn Airfield Comment	Church Fenton Comment	Gascoigne Wood Comment	Willow Green Comment
Spatial issues	Use brownfield land wherever possible Reduce the loss of and damage to the most versatile agricultural land Reduce the quantity of contaminated land	Area of previously developed land within the site	Yes	Yes	Yes	Not known
		Area of grade 1/2 agricultural land within the site	Yes	Not known	No	No
		Area of contaminated land	Likely	Likely	Likely	Not known
		Part or all of site within Green Belt	No	No	No	No
		Within growth area	Yes	Yes	Yes	Yes

Key:			
Positive	**Not known**	**Potential Negative**	**Negative**

2.8.10 As there are no detailed proposals for the four Selby District eco-towns we have not commented on the strengths of the proposal or issues for further consideration or assessed the proposal against the Progress Report draft standards.

2.9 How should we monitor sustainability impacts?

2.9.1 The sustainability impacts of eco-towns could be monitored partly through regional and local monitoring frameworks. Both the Regional Planning Body and Local Planning Authorities are required to monitor the implementation of their spatial policies – as set out in RSSs and LDFs – and report their findings in an annual monitoring report (AMR). Both RPBs and LPAs could therefore include indicators for monitoring the sustainability performance of eco-towns in their region/district or borough within their AMRs. In light of the appraisal, we consider that indicators should include a particular focus on transport and employment – two of the most challenging issues associated with eco-towns and two of the most important determinants of their overall sustainability. Indicators could include, for example, the proportion of the resident eco-town population who travel to work by public transport, walking and cycling and the number of eco-town residents employed within the town itself.

2.9.2 However, it will also be important that the wider 'lessons learned' in the planning, development and occupancy of eco-towns are effectively captured and disseminated. This will require gathering a wider range of information including on issues such as funding and partnership working and essentially telling the story of how the town was developed, the obstacles encountered and how these were negotiated. Inspiration could be taken from the Lessons from Cambourne, an evaluation of a new settlement 10 miles west of Cambridge and the insights this provides.[21]

[21] Platt, S. (2007). *Lessons from Cambourne* [online] available at: http://www.inspire-east.org.uk/FileAccess.aspx?id=744 (accessed 15 August 2008).

3. Habitat Regulations Assessment

3.1 Introduction

3.1.1 This section sets out the Appropriate Assessment component of the Habitats Regulations Assessment (HRA) for the shortlisted eco-town location and associated development proposal at **Leeds City Region**. The Introduction to the SA/HRA of the Programme should be referred to for details of the assumptions and principles underlying this assessment, While the Annex, *Profile of European Sites* provides details of the European sites scoped into the assessment including reason for designation, most recent Natural England condition assessment for component SSSIs and key environmental conditions necessary for maintenance of site integrity.

3.1.2 European sites were scoped into each Appropriate Assessment using the distance criteria set out in the Introduction to the PPS or (particularly when considering water resource and quality issues) as a result of the identification of a pathway linking the eco-town with a European site.

3.1.3 In practice, the gaps in the data regarding most European sites means that precise differences in distance cannot easily be detected by the assessment tools currently available, particularly with regard to recreational pressure. For example, distinguishing between the scale of recreational impact resulting from a development situated 15km away from a given Natura 2000 site and one situated 17km away would require very detailed site-specific visitor data for the Natura 2000 site which we have not been able to source. For this reason and because all of the Leeds City Region alternatives are a considerable distance from the European sites scoped into this assessment, it has proven difficult to discriminate between the recreational impacts of the four locations on European sites. In addition, because of the cross-regional approach to water supply planning and delivery adopted by Yorkshire Water and the hydraulic connections of all the relevant rivers in the area to the same ultimate European site (the Humber Estuary) the appropriate assessments of the alternative locations are unavoidably similar.

3.1.4 Bearing that in mind, the European sites that have been scoped into consideration for this eco-town are, by alternative location:

Church Fenton	Gascoigne Wood	Burn Airfield	Willow Green, Eggborough
Skipwith Common SAC (11km to the east)	**Skipwith Common SAC (14km to the east)**	**Skipwith Common SAC (9km to the northeast)**	**Skipwith Common SAC (17km northeast)**
Lower Derwent Valley SAC (17km to the east)	Lower Derwent Valley SAC (16.5km to the east)	Lower Derwent Valley SAC (12km)	Thorne Moor SAC (15km southeast)
Kirk Deighton SAC (17km)	Humber Estuary SAC & SPA and Ramsar site (22km to the east)	Thorne Moor SAC (15km southeast)	Thorne & Hatfield Moor SPA (15km southeast)
		Thorne & Hatfield Moor SPA (15km southeast)	Humber Estuary SAC & SPA and Ramsar site (17km southeast)
		Humber Estuary SAC & SPA and Ramsar site (13km east)	

3.2 Assessment

Urbanisation

3.2.1 Given that even the closest of the various Leeds alternatives lies 9km from the nearest European site, it can be said that the settlement will not lead to adverse effects upon European sites as a result of the general 'urbanisation' impacts (eg arson, fly-tipping, car dumping etc) that can be suffered by those sites that lie very close to substantial settlements. This would apply whichever of the four alternatives were chosen.

Recreational pressure

3.2.2 We have not been able to obtain accurate data on the recreational catchments for any of the European sites scoped into this assessment. However, it is unlikely that the habitats which support the great crested newt populations at Kirk Deighton SAC are sufficiently vulnerable to recreational pressure that a material adverse effect upon the newt population would result from an increase.

3.2.3 For the other sites we must rely on the broad figures from the England Day Visits survey. This indicated that recreational users would typically travel 17.2km to visit a 'countryside' site for the day, a distance within which all the above sites lie in relation to most of the Leeds alternatives. The exception is Gascoigne Wood which lies 22km from the Humber Estuary. However, the

England Day Visits data also indicated that respondents travelled an average of 25.5km to visit a 'coastal' site, which would certainly include the Humber Estuary.

3.2.4 Given this, it is possible that the new settlement will contribute cumulatively with some of the 22,260 dwellings per annum to be delivered elsewhere in the region under the Yorkshire & Humber Regional Spatial Strategy and other initiatives to an overall increase in visitor pressure on some or all of the European sites included in this assessment and will make the management of recreational pressure that much more challenging to deliver.

3.2.5 In terms of discriminating between the four locations it can be seen that Burn Airfield and Willow Green are slightly closer to a greater number of European sites than Church Fenton or Gascoigne Wood, but otherwise the available data are insufficient to make a significant distinction between the four alternatives.

Local air quality

3.2.6 As discussed in the Introduction to the SA/HRA of the Programme, this section confines itself to consideration of local air quality effects on European sites that lie within 200m of those local roads (defined for the purposes of this assessment as being those within 2km of the eco-town) that can reasonably be expected to experience a substantial increase in regular vehicle movements as a result of the general movements of the population. Since the nearest European site is 7km distant from the closest eco-town it can be concluded that there will be no such issues associated with Leeds City Region. The cumulative contribution of the eco-towns to diffuse pollution and local deposition on European sites elsewhere in the region/country are dealt with as a separate pan-regional issue within the Introduction to the SA/HRA of the Programme.

Water resources

3.2.7 Most of Yorkshire (including the area around Doncaster) falls within Yorkshire Water's Grid Surface Water Zone, with urban areas in the west and south of Yorkshire being principally supplied from reservoirs in the Pennines. Resource supply in this Zone in the future will involve increased abstraction from the existing River Ouse WTW. According to Yorkshire Water's most recent Water Resource Management Plan (2008) 'the Environment Agency has assessed the impacts of this solution and believes that utilising the full licence on the River Ouse is sustainable'.

3.2.8 Since water supply in Yorkshire is so complex it is not possible to determine from which source/sources water for the Leeds site is likely to be obtained. However, according to the Aire & Calder CAMS, Leeds lies within the Lower to Mid-Aire WRMU1. Most resources within this WRMU are already identified as being over-abstracted.

3.2.9 The River Aire ultimately drains to the Humber Estuary SAC, SPA & Ramsar site at Airmyn, approximately 70km to the east of Leeds. Although the distances involved render it unlikely that increased abstraction from the Aire to service the Leeds development in isolation would lead to an adverse impact on freshwater flows into the Humber Estuary, this eco-town must be considered within the context of the overall increases in abstraction from tributaries of the Aire, Trent and other rivers that drain to the estuary that will be required to service some of the 86,093 dwellings per annum that will be constructed across Yorkshire & Humberside, the Midlands and East of England under the Regional Spatial Strategies, and within this context it is not possible to state that adverse effects will not occur.

3.2.10 Since the water supply mechanism is not known at this stage, it is not currently possible to definitively conclude that the process of supplying the development with water will not involve levels of abstraction that would inadvertently lead to an adverse effect on European sites such as the Humber Estuary.

Water quality

3.2.11 The nearest Sewage Treatment Works (STW) to which the Leeds development is most likely to be connected discharge to tributaries of the River Aire or River Ouse, which in turn both drain to the Humber Estuary.

3.2.12 There will be substantial dilution of any phosphates and nitrates contained in treated sewage effluent discharged to the Aire from Leeds due to the presence of numerous tributaries of the Aire between Leeds and the Humber Estuary. However, it is reasonable to conclude that some of these watercourses may themselves carry higher levels of phosphate and nitrate due to increased development within the Midlands and Yorkshire & Humberside (which together will see an annual housing increase of 59,263 dwellings), and cumulatively it cannot at this stage be considered unlikely that the Leeds City Region eco-town will contribute to heightened nitrate levels (and a reduction in dissolved oxygen) in the Humber Estuary SPA.

Coastal squeeze

3.2.13 Not applicable, since even the closest of the alternative locations is 13km from the nearest coastal European site (Humber Estuary SAC, SPA and Ramsar site).

3.3 Conclusion

3.3.1 It is not possible at this stage to say with confidence that the development that may be delivered at Leeds under the Eco-Towns Policy Framework will not lead to adverse effects on some or all of Skipwith Common SAC, Lower Derwent Valley SAC, Kirk Deighton SAC, Thorne Moor SAC, Thorne & Hatfield Moors SPA or the Humber Estuary SAC, SPA and Ramsar site

as a result of increased recreational pressure, on European sites as a result of increased abstraction, or the Humber Estuary SPA/SAC as a result of declining water quality. It is also not possible given the sensitivity of the tools available and the degree of eco-town plan development to draw much distinction between the various alternative locations in terms of adverse effects on European sites.

3.3.2 Additional measures are therefore required within the PPS to provide sufficient direction (in terms of both scope and detail) to enable eco-towns to deliver the detailed site-specific measures necessary to avoid or mitigate an adverse effect. With these recommendations for mitigation and avoidance measures it is essential to bear in mind that these are recommendations for a policy in a PPS. As such they are constrained by the fact that individual policies cannot be tailored to specific eco-towns but must be sufficiently general to cover all the eco-towns and any future developments that will seek to acquire the 'eco-town' label.

3.4 How can we mitigate effects?

Recreational pressure

3.4.1 It has not been possible (largely due to an absence of accurate data on recreational catchments) to conclude with confidence that the Leeds City Region eco-town would not lead to adverse effects on some or all of Skipwith Common SAC, Lower Derwent Valley SAC, Kirk Deighton SAC, Thorne Moor SAC, Thorne & Hatfield Moors SPA or the Humber Estuary SAC, SPA and Ramsar site as a result of recreational pressure, when considered in combination with all other developments promoted by the Regional Spatial Strategies and other initiatives, without additional measures being included within the Policy Statement. These measures are given below.

3.4.2 There is a policy in the Draft PPS that states:

3.4.3 *"Forty per cent of the town's total area must be allocated to green infrastructure of which at least 20 per cent must be public and consist of a network of well managed, high quality green / open spaces which is linked to the wider countryside. There must be a range of types of green space eg community forests, wetland areas, town squares etc and the space should be multifunctional e.g. to provide for play, recreation, wildlife, flood management etc. Particular attention should be given to land to allow the local production of food from community, allotment or commercial gardens. There must be a strategy for enhancing local biodiversity through positive management of the local ecosystem and restoration of degraded locations."*

3.4.4 The scale of greenspace provision required (40 per cent of the total area) and the reference to habitats of potential biodiversity value (eg community forests) could reduce the extent to which residents are likely to visit European sites and thereby minimise any potential increase in visitor pressure.

3.4.5 Due to the limitations of the assessment tools and data available at this time (and in particular the inability to quantify the number of residents of each eco-town that will be making use of the European sites in question and what proportion of the total cumulative load this represents), coupled with the need for any standards within the PPS to be generally applicable, it is not possible to specify an exact quantity of alternative natural greenspace that will need to be provided for individual eco-towns in order to absorb recreational visitors to such an extent that they will not materially contribute towards recreational pressure on the European sites in question.

3.4.6 While specific standards for the provision of open space have been developed for the Thames Basin Heaths SPA (known as Suitable Accessible Natural Greenspace or SANGs), it is acknowledged that they are not necessarily universally applicable. However, Natural England's more general Accessible Natural Greenspace Standards (ANGSt) provide a set of benchmarks for ensuring access to places of wildlife interest and were specifically developed to provide size and distance criteria to provide natural spaces that will contribute most towards sustainable use of recreational resources. While the criteria were not developed with the specific intention of mitigating for adverse impacts on European sites, they were intended to specify a level of semi-natural greenspace provision that would meet the needs of a development's population.

3.4.7 In many cases natural greenspace provision to the ANG Standard should serve to minimise the need for recreational resources further afield (ie European sites) to receive an unsustainably large influx of visitors provided that they are delivered within a timescale linked to that of the development and will fulfil a function similar to that of the European site in question (ie dog walking and appreciation of nature rather than more formal recreational activities). For these reasons, we have selected the Natural England ANG standards as the criterion for semi-natural greenspace provision that the PPS should require eco-towns to meet in order to ensure that sufficient recreational space is provided to minimise adverse effects on the identified European sites.

3.4.8 It is therefore recommended that the following additions to the recreation Policy are incorporated in order for it to provide a more detailed specification:

- As a minimum, new areas of natural (as opposed to more formal) greenspace created as part of the 40 per cent area allocation indicated above should be provided in alignment with the Natural England Accessible Natural Greenspace Standard (ANGSt), which would require the provision of a natural greenspace (as opposed to a more formal park) of at least 2 hectares in size, no more than 300 metres from the houses it is intended to serve, and new statutory Local Nature Reserves at a minimum level of one hectare per thousand population. If, after the project-level Appropriate Assessment for the eco-town, it is considered that the ANGSt level of provision will be inadequate to reduce the recreational pressure on a European site then a higher level of provision should be made, in line with the conclusions of the project assessment.
- Where the eco-town proponents intend to include existing areas of publicly accessible semi-natural greenspace within their allocation in order to meet these standards, they would need to demonstrate that sufficient capacity remained within these sites to absorb the new population from the eco-town.
- The relevant greenspace would need to be provided in advance of occupation of the eco-town and will need to serve a similar recreational function to the European sites from which it is intended to draw recreational users (eg dog-walking and appreciation of nature).
- It is acknowledged that there are some European sites which have an intrinsic appeal that is sufficiently great that the provision of alternative greenspace is unlikely to result in a material reduction in recreational pressure. In these cases the developer would need to liaise with stakeholders in the European site to assist in the development and long-term delivery of an appropriate Site Management Plan, particularly addressing any changes in management that would be necessary to respond to increased visitor numbers or to constrain or manage such an increase. Precise details of measures to be implemented and the actual scale of any contribution would need to be agreed with Natural England and other stakeholders at the project-level Appropriate Assessment but these may need to include car park closures, fencing and moving of footpaths informed by data on visitor behaviour patterns on the European site in question.

Water resources

3.4.9 It has not been possible to conclude with confidence that the Leeds City Region eco-town would not lead to adverse effects on European sites as a result of additional demands on water resources, when considered in combination with all other developments across the area promoted by the Regional Spatial Strategies and other initiatives, without additional measures being included within the PPS.

3.4.10 Avoiding an adverse effect is largely in the hands of the Water Companies (through their resource planning) and the Environment Agency (through their abstraction licensing process). However, there are actions that can be taken by local authorities and central government through the PPS. The water efficiency and drainage policy in the Draft PPS does include two robust measure to maximise water efficiencies and these will contribute considerably to minimising water consumption and therefore mitigating adverse effects on European sites from the eco-towns:

"Eco-towns in areas of serious water stress should aspire to achieve water neutrality, i.e. achieving development without increasing overall water use across a wider area …. And set out how….New homes will be equipped to meet the water consumption requirement of Level 5 of the Code for Sustainable Homes"

3.4.11 However, it is recommended that the following additions to this Policy are incorporated in order for it to be additionally robust:

"Specific reference should be made to the fact that the eco-town development should only take place once any new water supply infrastructure necessary to service the development while avoiding an adverse effect on European sites is in place. The PPS should also indicate how this need will be determined and delivered through interaction with other authorities (Water Companies, the Environment Agency etc) ie through a Water Cycle Strategy"

Water quality

3.4.12 It has not been possible to conclude with confidence that the Leeds City Region eco-town would not lead to adverse effects on the Humber Estuary SPA and Ramsar site as a result of deteriorating water quality from increased volumes of treated sewage effluent, when considered in combination with all other developments across the area promoted by the Regional Spatial Strategies, without additional measures being included within the Policy Statement. These measures are given below.

3.4.13 Avoiding an adverse effect is largely in the hands of the Water Companies (through their resource planning) and the Environment Agency (through their abstraction licensing process). However, there are actions that can be taken by local authorities and central government through the PPS. The water efficiency and drainage policy in the draft PPS does not contain any specific measures relating to water quality and it is therefore recommended that the following additions to this Policy are incorporated in order for it to be additionally robust:

- Specific reference should be made to the fact that the eco-town development should only take place once any new wastewater treatment infrastructure necessary to service the development while avoiding an adverse effect on European sites is in place. The Policy Statement should also indicate how this need will be determined and delivered through interaction with other authorities (Water Companies, the Environment Agency etc) ie through a Water Cycle Strategy.

The Eco-towns PPS

3.4.14 The Draft PPS sets the standards for eco-towns at a strategic level; as such, it is important that it incorporates those mitigation and avoidance measures identified as being necessary for all the potential eco-towns. Incorporating these measures within the PPS will help ensure their implementation as the eco-town proposals develop. With this in mind, the recommended mitigation and avoidance measures identified in this section are reproduced within the HRA of the Draft PPS itself (even though the need for the measures arises from the specific eco-town rather than the Draft PPS).

Further HRA/AA

3.4.15 This HRA/AA has been undertaken at a strategic level and is therefore necessarily broad in its assessment, conclusions and recommendations. It constitutes the first of a series of successive assessments that will be undertaken for each of the eco-towns that are taken forward. As each tier of the planning system is negotiated and the eco-town proposals are further developed, a new and more detailed HRA/AA will be required. For example, where the eco-town is included in a Local Development Framework, the proposal will be subject to HRA/AA and reappraised in the light of more detailed information that may be available and further mitigation or avoidance measures may also be suggested. Planning applications for eco-towns will also need to include a detailed HRA/AA which will demonstrate how the necessary mitigation measures will be delivered on the ground.

Glossary

Abbreviation

AA	Appropriate Assessment
AD	Anaerobic Digestion
AMR	Annual Monitoring Report
AONB	Area of Outstanding Natural Beauty
AQMA	Air Quality Management Area
AWCS	Automated Waste Collection Systems
CAMS	Catchment Abstraction Management Strategies
CHP	Combined Heat and Power
CNP	Campaign for National Parks
CPRE	Campaign to Protect Rural England
CRP	Community Reference Point
DEFRA	Department for the Environment, Food and Rural Affairs
DPA	Dwellings Per Annum
DPD	Development Plan Document
EIA	Environmental Impact Assessment
EiP	Examination in Public
EP	English Partnerships
FEH	Flood Estimation Handbook
GWMU	Chalk Groundwater Management Unit
HRA	Habitats Regulations Assessment
IMD	Index of Multiple Deprivation
ISET	Institute of Sustainable Energy Technology
LCAs	Landscape Character Areas
LDF	Local Development Framework
LNR	Local Nature Reserve
LoWS	Local Wildlife Site
LPA	Local Planning Authority

MBC	Metropolitan Borough Council
MRF	Material Recycling Facility
MUSCO	Multi-Utility Supply Company
NNR	National Nature Reserve
ONS	Office of National Statistics
PDL	Previously Developed Land
PUA	Principal Urban Area
RDF	Refuse Derived Fuel
RPB	Regional Planning Body
RTR	Rapid Transit Route
SA	Sustainability Appraisal
SAC	Special Areas of Conservation
SAPs	Species Action Plans
SEA	Strategic Environmental Assessment
SEEDA	The South East England Development Agency
SFRA	Strategic Flood Risk Assessment
SINCs	Sites of Importance for Nature Conservation
SLA	Special Landscape Area
SNCI	Sites of Nature Conservation Importance
SOAs	Super Output Areas
SPA	Special Protection Areas
SRS	Sub-Regional Strategy
SSSI	Site of Special Scientific Interest
STW	Sewerage Treatment Works
SUDS	Sustainable Drainage Systems
SUE	Sustainable Urban Extension
UKCIP	UK Climate Impacts Programme
WRAP	Waste & Resources Action Programme
WRMU	Water Resource Management Units
WRZ	Water Resource Zone