

eco-towns

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

Curborough





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Prepared by Scott Wilson for Communities and Local Government

Curborough

November 2008

Scott Wilson Ltd

Department for Communities and Local Government

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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 chapter sets out the draft Sustainability Appraisal and Habitats Regulations Assessment of the shortlisted eco-town location and associated development proposal at **Curborough**. The scheme has been withdrawn from the current eco-towns process, so this appraisal relates solely to the location.
- 1.1.2 As this Sustainability Appraisal and 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 (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 *"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.

1.3 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 and in particular to bring forward

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

up to 10 schemes and ensure that development is underway by 2016 with the first potentially starting on site as early as 2010. The Government has short listed a series of potential eco-town locations² – of which **Curborough** 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 Curborough – are documented in this report. In a parallel exercise, the Government is deciding which of the schemes related to the short listed locations will get backing or financial support from Government through funding of associated infrastructure or partner public bodies.

1.4 SA and HR

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 Directive³, 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 legislation⁴. 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?
- What are the key sustainability objectives we need to consider?

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

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'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?	<i>"an outline of the contents, main objectives of the plan or Programme and relationship with other relevant plans and Programmes"</i> (Annex I(a))
What's the policy context?	<i>"an outline of the contents, main objectives of the plan or Programme and relationship with other relevant plans and Programmes"</i> (Annex I(a))
What are the key sustainability objectives we need to consider?	<i>"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"</i> (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)	<p>"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))</p> <p>"the environmental characteristics of areas likely to be significantly affected" (Annex 1(c))</p> <p>"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 1(d))</p>
What will be the situation <i>without</i> 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 1(b))
What will be the situation <i>with</i> the eco-town?	<p>"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]</p> <p>(1) These effects should include secondary, cumulative, synergistic, short, medium and long-term permanent and temporary, positive and negative effects" (Annex 1(f))</p>
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 1(g))
How should we monitor sustainability impacts?	"a description of the measures envisaged concerning monitoring..." (Annex 1(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 disadvantages 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 Directive⁶ 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 (see Part II). A full AA was therefore undertaken for each location and the assessment for Curborough 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 the shortlisted eco-town location and associated development proposal at **Curborough**.

2.2 What's the objective of the proposal?

2.2.1 The proposal is for 5,000 dwellings on a 314ha site near Lichfield in Staffordshire. Curborough eco-town was being promoted by the Curborough Consortium, referred to in the following text as the Site Promoters. More than 93 per cent of land is controlled by the Consortium, either under their ownership, legally binding options or similar arrangements. However, the proposal was withdrawn on 7 July 2008 following discussions with Communities and Local Government. Discussions are continuing with the District Council in relation to a planning application for a new settlement at Curborough which was originally submitted on 27 March 2008.

2.2.2 The proposed location lies to the north of Lichfield, close to the line of the A38 and the existing villages of South Fradley and Fradley, as illustrated in Figure 1. Larger settlements in the vicinity include Tamworth (19km), Burton-upon-Trent (18km) and Sutton Coldfield (18km). Much of the proposed location was part of the old Fradley airfield and lies adjacent to a major employment area offering 7,000 jobs when fully completed.

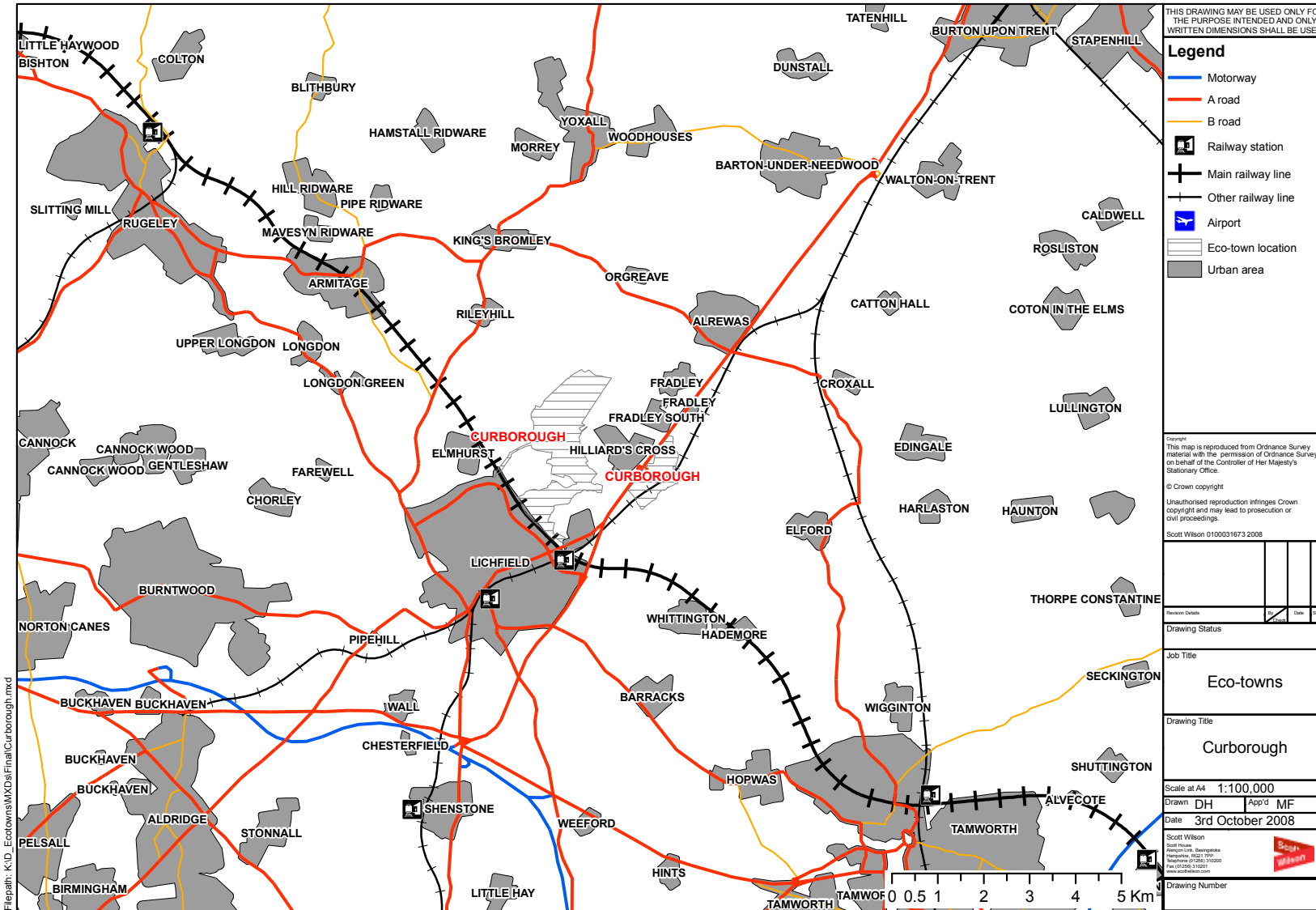
2.2.3 Lichfield District is a primarily rural district of 92,000 population located to the north of the West Midlands conurbation. It has traditionally been a popular location for commuters, particularly to Birmingham. Lichfield (population: 28,000) and Burntwood (population: 26,000) are the only two towns in the district but there are a number of large villages scattered throughout the area.

2.2.4 When the proposal was put forward, Curborough eco-town planned to embody some of the latest thinking on sustainable design, modes of transport and included provision for a new Eco Energy Park, as well as the provision of new retail and community facilities.

Have any further local alternatives been proposed?

2.2.5 No alternatives to the Curborough eco-town location have been formally proposed by the local planning authority (Lichfield District Council).

Figure 1: Curborough eco-town – settlement pattern and transport infrastructure



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 and local level relevant to the shortlisted location and proposed development.
- 2.3.2 The West Midlands Regional Spatial Strategy (WMRSS), formerly RPG11, sets a minimum housing target for Staffordshire for the period 2007 to 2011 of 2,500 net additional dwellings per annum (equating to a total of 10,000 net additional new dwellings), and 1,600 net additional dwellings per annum between 2011 and 2021 (equating to 16,000 net additional new dwellings). Following the publication of the Preferred Options for the Phase 2 Revision of the WMRSS in October 2006, it is anticipated that around 8,000 additional new dwellings will be required within Lichfield District between 2006 and 2026. However, the Revision of the WMRSS has yet to be finalised and, as such, this housing figure could be subject to amendment.
- 2.3.3 A new settlement at this location has been considered as part of the development of the Core Strategy for the Lichfield Local Development Framework (LDF). The Core Strategy Issues and Options Paper identified four spatial options for development, including one which was to concentrate development in a new settlement. Following consultation on the Issues and Options, the Council is currently developing its preferred spatial strategy. The consultation responses to the Issues and Options Paper suggested that a small majority of respondents favoured the development of a new settlement as the preferred approach.

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

- 2.4.1 Preliminary scoping work undertaken by Faber Maunsell 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

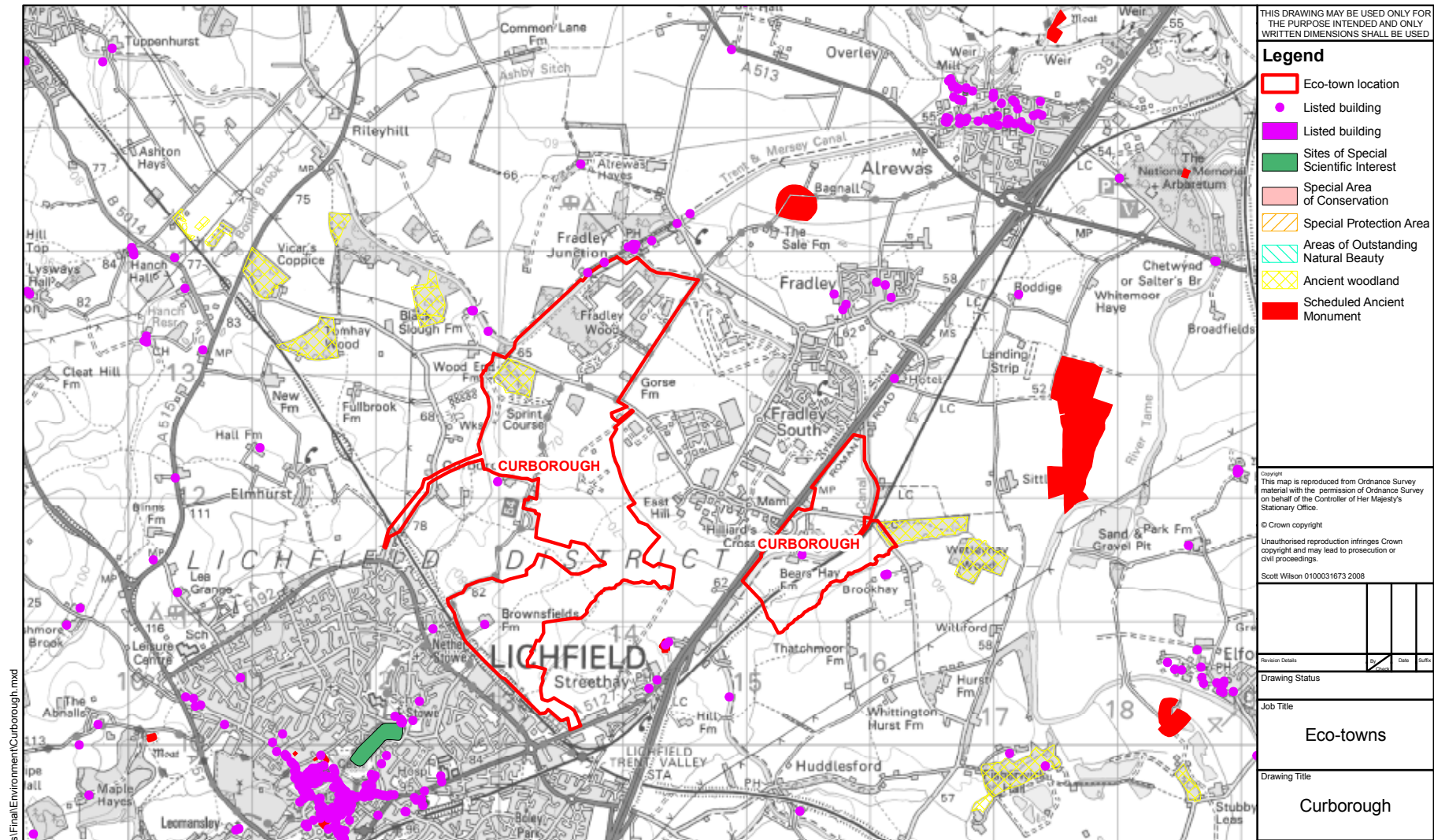
- spatial issues

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

Biodiversity and green infrastructure

- 2.5.1 As shown in Figure 2, the biodiversity value of this part of Staffordshire is primarily associated with numerous patches of ancient and semi-natural or ancient replanted woodland dotted throughout the landscape, many of which are listed on the National Inventory of Woodland and Trees (England).

Figure 2: Curborough eco-town location and environmental constraints



2.5.2 Big Lyntus wood is designated as Semi-Natural Ancient Woodland and Ancient Replanted Woodland. Little Lyntus wood is an Ancient Woodland and is acknowledged by Natural England in their June 2008 consultation response as requiring protection and appropriate mitigation. Fradley Wood is listed on the National Inventory of Woodlands and Trees (England) and the open glades and rides are a component of the woodland⁷.

2.5.3 The woodlands in the area are mainly small parcels or configured in long, thin strips. This makes them extremely vulnerable to fragmentation and damage through increased public access and recreational pressure.

2.5.4 Habitats and species identified in the Staffordshire Biodiversity Action Plan (BAP) that require consideration include:

- native woodland
- ancient/diverse hedgerows
- arable field margins
- lowland heathland
- lowland acid/lowland calcareous/lowland wet/unimproved neutral grassland
- ponds/lakes/canals/rivers/streams
- native Black Poplar
- pipistrelle/noctule bat
- brown hare
- otter
- water vole
- skylark
- barn owl
- great crested newt

Climate change adaptation and flood risk

2.5.5 The Environment Agency has identified that flood risk is an issue which affects a part of this location close to the Curborough Brook which runs down the west side of the site. Preliminary proposals did not include development within this area although it would be subject to landscape enhancement. The Environment Agency has requested further modelling which may slightly redefine the flood zones.

⁷ Lichfield District Council, Arboricultural comments in respect of Planning Application 08/00324/OUTM.

Figure 3: Flood Risk around Lichfield⁸



Climate change mitigation

2.5.6 A climate change background paper for the Lichfield Local Development Framework is currently in preparation and it is anticipated that it will be available for consultation in winter 2008. The paper will aim to provide a summary of the current evidence base, an identification of the key messages arising and highlight emerging key issues and make recommendations where appropriate⁹.

Landscape and historic environment

2.5.7 A draft Biodiversity and Landscape Supplementary Planning Document (SPD)¹⁰ was prepared by Lichfield District Council in 2006 but will not be formally adopted until the Core Strategy is in place.

2.5.8 The draft SPD identifies the Curborough area as being associated with the Trent Valley Washlands Regional Character Area and the Trent and Valley Rises Natural Area Profile. The landscape is described as being a flat,

⁸ Environment Agency (2008) *Flood Risk around Lichfield* [online] available at: http://maps.environment-agency.gov.uk/wiyby/wiybyController?x=411500.0&y=309500.0&topic=floodmap&ep=map&scale=4&location=Lichfield,per cent20Staffordshire&lang=_e&layerGroups=default&textonly=off

⁹ Lichfield District Council (2008) *Local Development Framework Evidence Base* [online] available at: www.lichfield.gov.uk

¹⁰ Lichfield District Council (2006) *Biodiversity and Landscape Supplementary Planning Document: Consultation Draft*.

intensively farmed landscape characterised by a well-wooded appearance (some of ancient origin) due either to the high percentage of interlocking woodlands or coalescence of stunted hedgerow oaks and overgrown hedgerows. Remnant heathland character is evident in the presence of birch, bracken and gorse. The land use of mixed arable and pastoral farming gives way to intensive arable agriculture associated with the WWII airfield site.

- 2.5.9 The presence of railways, main roads and electricity pylons and the intrusive nature of the individual residential properties erode the aesthetic quality of the area. The visual dominance of the former airfield, now a rapidly expanding industrial estate, further degrades the landscape, although there are views to surrounding woodland. There is a notable change in character of this landscape where land use has been extensively modified due to its proximity to Fradley village. Here the landscape is of a small to intimate scale with irregularly shaped fields subject to low intensity pastoral farming and horse paddocks.
- 2.5.10 The associated village still retains much of its original character due to its enclosed nature and rural atmosphere. However, rapid growth is having some adverse visual impact.
- 2.5.11 With the exception of the area around the former airfield, these are landscapes of high quality although impaired by the loss of some of the semi-natural vegetation (particularly heathland and acidic grasslands) characteristic of this landscape type. Staffordshire County Council is carrying out a study on Historic Landscape Characterisation and it is anticipated that the report will be published in autumn 2008.
- 2.5.12 Figure 2 (above) shows that there are two listed buildings within the proposed development area but no scheduled ancient monuments. However, there are large clusters of Listed Buildings in the historic city of Lichfield and in the surrounding settlements. There are also several Scheduled Ancient Monuments in the wider area.

Waste

- 2.5.13 Almost 50 per cent of Lichfield District's waste was recycled or composted in 2007/08¹¹. The amount of household waste collected per head of population in Staffordshire was 518 kg in 2007/08 compared with 559 kg in 2006/07. Similarly, the proportion of household waste sent to landfill decreased in the same time period from 42.5 per cent to almost 36 per cent¹².

¹¹ Lichfield District Council (2008) *Waste Strategies* [online] available at: http://www.lichfielddc.gov.uk/site/scripts/documents_info.php?documentID=888&pageNumber=4

¹² Staffordshire County Council (2007/08) *Best Value Performance Plan 2007/08 Performance Report* [online] available at: www.staffordshire.gov.uk.

Water resources and water quality

- 2.5.14** The Trent Corridor Catchment Abstraction Management Strategy, published in December 2003¹³, states that Water Resource Management Unit 2 (WRMU2) – Sow to Tame (AP3) includes the confluence of the River Sow downstream to immediately upstream of the confluence with the River Tame. There are a number of water-dependent Sites of Importance for Nature Conservation (SINCs) and two priority Biodiversity Action Plan (BAP) species. There are 26 abstraction licences from the river; many are for spray irrigation but there is also the abstraction licence for Rugeley Power Station. The resource availability status is 'no water available'.
- 2.5.15** According to monitoring undertaken by the Environment Agency¹⁴ the quality of water bodies in the vicinity of Curborough is varied. Both the Coventry Canal and the Trent and Mersey Canal have low to medium levels of phosphates and nitrates, good biological ratings and medium to poor chemical ratings. However, Pyrford Brook at Hilliards Cross has high levels of phosphates and nitrates and relatively poor biological and chemical rating. It is possible that the latter ratings could be a result of eutrophication from agricultural run-off from the surrounding area.
- 2.5.16** A recent assessment by the Environment Agency has identified the Midlands as an area of "moderate" water stress. The proposed growth point is in the South Staffordshire Water Resource Zone. Although the zone is currently in surplus there are supply capacity issues in this zone particularly during periods of peak demand. Thus development within this zone, especially of the scale proposed at Curborough, would require management measures such as resource development and efficiency to ensure water availability for current and future residents.

Community infrastructure

- 2.5.17** Lichfield District is ranked as the most affluent District in southern Staffordshire. However, it also contains pockets of deprivation that figure highly in the national rankings including Curborough¹⁵.
- 2.5.18** The District has relatively good access to educational facilities with five High Schools, 37 Primary Schools, two schools for pupils with learning difficulties and disabilities and three well-established Independent Schools. Lichfield City is home to Staffordshire University's third campus, which it shares with Tamworth and Lichfield College. The partnership offers a range of learning opportunities and progression routes to a wide audience, including new businesses¹⁶.

¹³ Environment Agency (2003) *Trent Catchment Abstraction Management Strategy* [online] available at: www.environment-agency.gov.uk/cams

¹⁴ Environment Agency (2005/06) *What's in your backyard* [online] available at: www.environment-agency.gov.uk

¹⁵ Lichfield District Council (2006) *A Sustainable Community Strategy for the District of Lichfield 2006-2021* [online] available at: http://www.lichfielddc.gov.uk/site/scripts/documents_info.php?categoryID=93&documentID=376

¹⁶ Lichfield District Council (2006) *A Sustainable Community Strategy for the District of Lichfield 2006-2021* [online] available at: http://www.lichfielddc.gov.uk/site/scripts/documents_info.php?categoryID=93&documentID=376

2.5.19 The Lichfield District Indoor Sports and Facilities Assessment¹⁷ identified that there are a number of different sports and leisure facilities within the District and that all leisure centres are well utilised. However, many facilities are either private or dual-use (often connected to a school) and this restricts access for many residents. Most parishes in the District have access to a village hall or community centre but it is noted that only a few of these are large enough to accommodate a range of activities. The parish of Alrewas and Fradley has a combined population of close to 6,000 residents but the modern village hall in Fradley is too small to accommodate many activities. A site for a new hall has been identified in Alrewas.

2.5.20 Two residential communities lie to the north and east of Fradley Park. These are Fradley Village and South Fradley. While South Fradley has no facilities, Fradley Village has a primary school, shop and village hall.

Community wellbeing

2.5.21 Monitoring data¹⁸ indicates that, in terms of the health of residents, Lichfield District performs significantly better than the national average in nine areas:

- early deaths from heart disease and stroke
- road injuries and deaths
- the number of adults who smoke
- the number of adults who eat healthily
- the number of hospital stays due to alcohol
- teenage pregnancy rates (under 18)
- self perceived poor health
- mental health
- rates of violent crime

2.5.22 Conversely, there are four areas where the District is significantly worse than the national average:

- female life expectancy
- flu vaccination rates
- infant deaths (aged under 1 year)
- homelessness

¹⁷ Lichfield District Council (2007) *Lichfield District Indoor Sports and Facilities Assessment* [online] available at: www.lichfielddc.gov.uk/site/scripts/documents_info.php?documentID=1014&pageNumber=15#navbox

¹⁸ South Staffordshire Primary Care Trust (2007) *Public Health for Practice Based Commissioning: The report of the Director of Public Health*.

2.5.23 For other health factors the public health profile suggests that Lichfield is neither significantly better nor worse than the national average.

2.5.24 Women in Lichfield experience lower life expectancy and higher all-age, all-cause mortality rates than the England average. There is a strong relationship between premature mortality rates and deprivation¹⁹.

Decent and affordable homes

2.5.25 Lichfield District contains a high proportion (80 per cent in 2003) of owner occupied households. This compares with 15 per cent of households renting through Housing Associations or Registered Social Landlords and 5 per cent renting in the private sector²⁰. Even though residents in Lichfield District have higher than average earnings, the housing affordability ratio remains high at 9.9, compared to 8.7 for Staffordshire or 9.0 for the West Midlands region. This means that access to home ownership is beyond the reach of many existing and forming households²¹.

2.5.26 The District contains a high proportion (75 per cent in 2001) of detached and semi-detached dwellings. The general condition of dwellings in the District is good with only 4.7 per cent of households having no central heating and only 0.2 per cent of households being without their own bath or shower and toilet. Only 2.6 per cent of housing was classed as unfit in 2006. The rate of overcrowding in 2001 was 3 per cent, which is more than 50 per cent less than the average rate for England and Wales of 7 per cent²².

2.5.27 135 additional affordable dwellings were provided within the District in 2002-3, 192 dwellings in 2003/04 and 114 dwellings in 2004/05; in 2004/05 this equated to 21 per cent of the total number of housing completions²³.

2.5.28 The Regional Housing Strategy identified affordability issues in the Central Sub-Regional Housing Market Area within which the Curborough proposal is located.

Transport and accessibility

2.5.29 The proposed eco-town is located 7km to the north of the centre of Lichfield. The Curborough area is located in close proximity to the A38, providing road access to the M6 Toll (10km). Burton lies 15km to the north and the Birmingham conurbation is some 35km to the south. The M42 is accessible at Tamworth 23km away.

¹⁹ South Staffordshire Primary Care Trust (2008) Health Profile for South Staffordshire Primary Care Trust.

²⁰ *Audit Commission, Lichfield Area Profile* [online] available at: www.audit-commission.gov.uk.

²¹ Lichfield District Council (2007) Housing Strategy 2006-2009.

²² *Audit Commission, Lichfield Area Profile* [online] available at: www.audit-commission.gov.uk.

²³ *Audit Commission, Lichfield Area Profile* [online] available at: www.audit-commission.gov.uk.

- 2.5.30 There are two railway stations in Lichfield: Lichfield Trent Valley and Lichfield City. Lichfield Trent Valley station is located on the Trent Valley Line which runs between Rugby and Stafford, whereas Lichfield City station is located on the Cross-City Line, a suburban railway running from Redditch to Lichfield via Birmingham New Street.
- 2.5.31 Transport infrastructure in the area is illustrated in Figure 1. There is currently a lack of public transport infrastructure at Curborough which would make it difficult to achieve an increased proportion of journeys by public transport.
- 2.5.32 There are currently considerable traffic problems around the A38 junction at Hilliards Cross. Lichfield District Council and the Highways Agency, have raised serious concerns regarding the impact of new development of this scale on this junction.

Employment and economy

- 2.5.33 The economy in Staffordshire is generally strong when compared with the West Midlands region and the rest of the UK with the level of economically active people being 80.4 per cent in 2007 compared with 77.1 per cent (West Midlands) and 78.6 per cent respectively (UK)²⁴. The vast majority of jobs are within the service sector and average workplace-based income levels are lower than those in the rest of the region and the UK. However, residence-based earnings are slightly higher than those of the region, which suggests that people commute out of the area to access higher paid jobs.
- 2.5.34 The Curborough location is adjacent to Fradley Park, the gross area of which extends to approximately 120ha, 60ha of which has been developed and is warehousing development of regional importance. There is a further 60ha of land available for development but this has not been included in the eco-town proposal. Fradley Park, fully developed, offers the potential for substantial employment opportunities.

Spatial issues

- 2.5.35 Lichfield District is a generally prosperous area with a vibrant economy. There are pressures for new housing and a particular need for affordable homes. The Curborough area has previously been examined by the Council as a possible site for development.

²⁴ Nomis *Labour Market Profile for Staffordshire* [online] available at: www.nomisweb.co.uk

2.5.36 A key objective of the West Midlands Regional Spatial Strategy (WMRSS) is to make the major urban areas (MUAs) of the West Midlands increasingly attractive places where people want to live, work and invest. Beyond the MUAs, the provision for housing will generally be concentrated in Settlements of Significant Development (including Burton upon Trent and Stafford) although some peripheral development of other settlements may need to be considered in LDDs, as part of an overall approach to the development of sustainable communities, provided this does not undermine the renaissance of the MUAs (Para 3.12(a)). Housing development outside these areas is primarily to meet locally generated needs. Thus, the Curborough proposal is somewhat contrary to the thrust of the RSS.

2.5.37 The land classification on the proposed site is predominantly Grade 3.²⁵

2.5.38 The Environment Agency has noted that there is likely to be some sporadic contamination across the site primarily related to the former airfield uses and, in particular, bomb storage, airplane maintenance and dismantling (including burial of aircraft).

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

2.6.1 If the eco-town does not progress two things may happen. On the one hand, the area may be developed as a new settlement of around 5,000 dwellings, as per a planning application submitted to Lichfield District Council in March 2008. Alternatively, there may be no development and the area will remain as agricultural land.

2.6.2 The implication of the first scenario is that there will still be significant development on a predominantly greenfield site. However, the new settlement may not incorporate significant sustainability features.

2.6.3 In the latter scenario there will be few changes. Climate change might impact on the crops grown but the site will remain substantially as now. The housing needs that would have been satisfied in Curborough will be satisfied in another part of Lichfield District.

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

Introduction

2.7.1 In this section we consider the sustainability of the proposed location and development at **Curborough**. The discussion is structured around the sustainability issues derived from the earlier scoping work.

²⁵ Magic (2008) *Agricultural Land Classification at Curborough* [online] at www.magic.gov.uk

2.7.2 The appraisal draws on information derived from:

- the scoping studies
- discussions with Lichfield District Council
- a site visit
- the comments of statutory agencies (eg English Heritage, the Environment Agency, Natural England, the Department of Transport)
- discussions with Communities and Local Government

Biodiversity and green infrastructure

2.7.3 The HRA is set out in detail in Section 3 of this chapter. In summary, three Natura 2000 sites (River Mease SAC, Cannock Chase SAC and the Humber Estuary SAC SPA & Ramsar site) were included in the assessment. It did not prove possible to say with confidence that the development at Curborough under the Draft PPS will not lead to adverse effects on Cannock Chase SAC (as a result of recreational pressure and increased abstraction of water), the Humber Estuary SPA (as a result of increased abstraction of water and declining water quality) or the River Mease SAC (as a result of recreational pressure) without further amendments to the PPS and these are detailed in Section 3.

2.7.4 According to the Site Promoter, a substantial part of the proposed Parkland between the formal playing field areas and Lichfield will become a designated area of nature and wildlife conservation. This will involve the utilisation of the area's existing conservation assets and the creation of a diverse range of habitats to encourage wildlife. It will include the establishment of ponds, woodland areas and nature trails which will enhance the overall biodiversity of the area.

2.7.5 Natural England has expressed concerns in relation to the fact that there is an important ancient woodland within the proposed eco-town boundary which will need to be given protection and appropriate management should the development proceed.

Climate change adaptation and flood risk

2.7.6 The Environment Agency have identified that flood risk is an issue which affects this location. They will be applying policies within the draft Trent Catchment Flood Risk Management Plan. The Level 1 Strategic Flood Risk Assessment (SFRA) for Lichfield District (2008) found that development at Curborough would avoid flood risk Zones 2 and 3.

2.7.7 According to the Site Promoter, a Sustainable Urban Drainage Strategy (SUDS) will be adopted to help minimise river flooding and surface run-off impacts. Together with rainwater harvesting, these measures will help reduce flood risk. A comprehensive surface water drainage scheme will be needed.

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.
- 2.7.9 The 'Eco Energy Park' will be developed on the east of the A358 and will provide a renewable energy source to enable the eco-town to become zero carbon by 2016 and a net exporter of renewable energy. Commercial buildings will also incorporate improved building fabric, night ventilation, good natural daylight and energy efficient lighting. As well as aiming to be naturally ventilated where possible, smart metering for both residential and commercial buildings will be incorporated to encourage monitoring of energy use.
- 2.7.10 All dwellings will aim to achieve Level 6 of the Code for Sustainable Homes. Commercial buildings will aim for a BREEAM "Excellent" level. Commercial buildings that could not be assessed under BREEAM will follow the BREEAM principles to ensure that they too achieve high standards of performance.
- 2.7.11 Materials will be selected on the basis of their overall lifecycle impacts, taking into account embodied energy, use of waste materials and pollutions emission in manufacture, and ability for re-use at the end of their life. Where possible, reclaimed materials will be used in construction and sourced from local sites or suppliers. All building elements will be assessed in relation to the BRE's Green Guide and aim to better the minimum requirements of Code level entry. It is proposed to explore the use of the adjoining canal network for transporting construction materials to site.
- 2.7.12 A site waste management strategy will be developed and adopted to reduce waste on site. All dwellings will be provided with appropriate facilities to enable them to recycle in line with the Local Authority's kerbside collection. This will include suitable internal and external storage in line with the Code. The commercial sector will also be encouraged to consider waste issues.
- 2.7.13 A combined heat and power plant (within the park) could utilise the following sources:
- municipal waste – Staffordshire County Council confirms that there is a need for a plant to treat municipal waste in the southern part of the county from 2013 onwards and that Fradley would be a suitable location for such a plant

- food wastes from food processing companies on the Fradley employment area
- biomass.

2.7.14 Initial assessments indicate that wind speeds in the area could be sufficient to justify wind turbines.

Landscape and historic environment

2.7.15 The Curborough development area (see Figure 3) extends to 314ha and contains part of the old Fradley Airfield, RAF Lichfield. The remainder of the airfield has either been developed, is under construction or has planning permission for mixed business uses. Half of the site is in agricultural use and there is some plantation woodland.

2.7.16 There are no designated landscapes within the development area. However, there are two conservation areas directly adjacent to the site: the Trent and Mersey Canal Conservation Area and the Fradley Junction Conservation Area. A number of Grade II listed buildings are located in the surrounding area and their setting will be an important consideration.

2.7.17 The site's generally flat topography means that the visual impact of the proposed eco-town would be reduced, while still maintaining visual links to Lichfield Cathedral. However, to the south of the development area, there is a need to maintain a green buffer to help protect the setting of Lichfield. Discussions are under way with landowners already cooperating in the project to bring forward further land capable of providing a parkland, suitable for recreation and conservation purposes, that will provide a positive contribution to maintaining the openness of the area.

2.7.18 It is proposed that Fradley and Big Lyntus Woods will be integrated into the new development. In addition, a network of green spaces will be created throughout the development to provide opportunities for pedestrian movement. Formal playing fields will be in accessible locations within the proposed parkland towards the southern edge of the proposed development area.

Figure 4: Proposed location of eco-town and surrounding landscape²⁶



Water resources and water quality

2.7.19 The Environment Agency has identified the area as being of “moderate” water stress and there are supply capacity issues during periods of peak demand. Development at Curborough would reduce the available water supply. Therefore, water management measures are likely to be needed to ensure water resources are available for current and future residents.

2.7.20 According to the Site Promoter, water use will be carefully managed. Mains water use will be reduced to around 80 litres per person per day through the installation of low water use appliances in dwellings. Rainwater harvesting systems will be used across the site.

Community infrastructure

2.7.21 While Curborough eco-town will depend on Lichfield for many higher order services and facilities, the intention will be to enable the new settlement to be as self contained as possible, and it will incorporate the following facilities:

²⁶ RPS Planning & Development (2007) Curborough: An eco-town for Staffordshire.

- a new secondary school with sports facilities and two new primary schools
- leisure facilities indoor and outdoor (to meet Sport England and NPFA standards)
- a local shopping centre (with supermarket and a range of other shops, pub and restaurants)
- community centre/village hall
- health centre (with medical and dental facilities in consultation with PCT)
- sites for place of worship, a day nursery and a library
- the new parkland area to the south will offer recreation, nature conservation and public access.

2.7.22 The proximity of the proposed eco-town to Lichfield could alleviate pressure on the town's services. Simultaneously, the Site Promoter feels that existing Fradley Village and South Fradley would benefit from easier accessibility to the wider range of facilities that would be built as part of the Curborough proposals. However, a detailed site proposal would need to ensure that the eco-town provided for the social, community and transport infrastructure needs of its residents, without unduly threatening the viability of Lichfield or exacerbating the pressure on existing infrastructure.

Community wellbeing

2.7.23 The proposed parkland areas offer both the new and neighbouring communities benefits such as new formal and informal recreation, nature conservation areas and space for community projects.

Decent and affordable homes

2.7.24 Approximately 5,000 dwellings will be constructed at an average net density of between 45 to 48 dwellings per hectare on a gross development site area of approximately 314ha. Between 30 per cent and 40 per cent of the housing will be social rented and shared equity with an emphasis on family housing. The Consortium envisages at least 80 per cent of all units being family houses with private garden areas and the remaining 20 per cent being apartments to accommodate smaller households. The proposal would contribute to meeting the housing needs of the District, including the acute need for intermediate and affordable housing.

Transport and accessibility

- 2.7.25 The Curborough area is located in close proximity to the A38 trunk road, one of the most important strategic links in the West Midlands. It is within easy reach of the M42 and the M6 Toll Road. However, there are considerable traffic problems around the A38 junction at Hilliards Cross and Lichfield District Council has raised concerns regarding the impact of the proposed development.
- 2.7.26 There is currently a lack of public transport infrastructure at Curborough which encourages high levels of car dependency. A detailed scheme would need to set out measures to improve public transport provision and encourage walking and cycling. When the proposal was submitted, a transport assessment of Curborough eco-town was being progressed in consultation with Staffordshire County Council and the Highways Agency.
- 2.7.27 Rail transport is readily accessible at the two railway stations in Lichfield, the nearest at Trent Valley only 4km from the site. There is also the opportunity to consider a new railway station/strategic park and ride on the east side of the A38 on the Lichfield to Burton line on land currently controlled by the Consortium. The Park and Ride scheme would reduce car movements on the busy Burton Road/Trent Valley Road arterial route into Lichfield as well as reducing traffic flows on the southern end of the A38.
- 2.7.28 In addition, it is proposed that new and enhanced bus services would be brought forward. These are to include high quality bus links to Lichfield and Burton as well as connections to the national rail network. The bus links would enhance public transport provision in northern and eastern Lichfield, to Fradley Park and to Fradley South and Fradley. A Job 'Hoppa' service is also proposed and this would provide commuter connections from the new settlement to the significant employment on the northern and eastern sides of Lichfield.
- 2.7.29 According to the Site Promoter, two new all-mode links between the new settlement and Lichfield will be provided, supported by a dedicated pedestrian and cyclist link (incorporating National Cycle Network Route 54) from the heart of the site into the city. There are long held aspirations to provide a new junction at this location. The Consortium owns land that will be needed to provide a new junction, and they intend to bring this forward as part of the Curborough proposals.

2.7.33 Curborough lies outside the Green Belt, the agricultural land classification is predominantly Grade 3 and some of the proposed development will be built on previously developed land.

2.7.34 Given that Lichfield is the main focus for retailing, services, administration, employment and education in the District and this is unlikely to change in the future, the longer term housing needs of the District will continue to be focused on this centre. According to the Site Promoter, Curborough therefore provides the best opportunity for meeting those needs while protecting the District's most important asset.

2.8 How can we mitigate/enhance effects?

2.8.1 The **key strengths of the location** from a sustainability viewpoint are:

- the existence of existing employment uses on site
- proximity to Lichfield
- the potential to enhance the landscape and built environment of the existing industrial estate
- some contamination which will be addressed

2.8.2 The **key weaknesses of the location** from a sustainability viewpoint are that:

- area of moderate water stress
- 77 per cent greenfield
- ancient woodland and priority habitats/species

2.8.3 The sustainability of Curborough as a potential eco-town location is further assessed 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. On this basis, Curborough has been assessed in accordance with the key at the end of Table 2 as:

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

Table 2: Sustainability of Curborough as an eco-town location

SA Issue	Site Specific Issues	Indicators	Comment
Biodiversity and green infrastructure	Conserve and enhance biodiversity	SSSIs within or adjacent to the site	No
	Protect and enhance priority habitats and species	Presence of priority habitats/species	Yes – identified in the Staffordshire BAP and designated areas of Ancient Woodland within and adjacent to the site boundary
	Increase and enhance green infrastructure		
Climate change adaptation and flood risk	Avoid development in areas of high flood risk	Area of flood risk 3 within site	Yes – but the majority of site is FZ1
	Avoid exacerbating flooding in the vicinity of the site	Area of flood risk 3 adjacent to the site	No
Climate change mitigation	Maximise use of renewable energy	Potential of the site for renewable energy	Yes
Landscape and historic environment	Protect and enhance the landscape	Designated landscapes across or adjacent to the site	No
	Protect and enhance heritage assets and their settings	Listed buildings/ ancient monuments within or adjacent to the site	Yes – 2 listed buildings within the development area Within the wider area there are several SAMs and the historic city of Lichfield
Water resources and water quality	Minimise impacts on water resources and water quality	Water supply status	The EA has identified the area as being of “moderate” water stress and there are supply capacity issues during periods of peak demand
		STW capacity	No – new works required

Table 2: Sustainability of Curborough as an eco-town location
(continued)

SA Issue	Site Specific Issues	Indicators	Comment
Community infrastructure/ wellbeing	Utilise existing infrastructure within its capacity	Will contribute to retaining character of higher order centre	May assist conservation of Lichfield
	Complement broader planning policies/ objectives	Will facilitate regeneration	Yes – industrial estate and airfield
		Within or adjacent to Air Quality management Area (AQMA)	Yes – NO ₂ AQMA declared at the Muckley Corner Roundabout on the A5 – potential main access from eco-town to A5 westwards
Decent and affordable homes	Meet housing need	Demand for housing	Yes
		Demand for affordable housing	Yes
Transport and accessibility	Provide easy access to a higher order centre	Proximity to higher order centre (distance)	Burton on Trent and Stafford c.20km (12.5 miles)
	Provide easy access to a railway station	Proximity to railway station (distance)	Trent Valley station c.4km (2.5 miles)
	Discourage long distance commuting	Proximity to existing sources of employment (scale/ distance)	Adjacent to Fradley Park Employment Area
	Proximity to area of poor air quality	Proximity to motorway/strategic road network (distance)	Adjacent to A38, providing direct access to A5 and M6 Toll
Spatial issues	Use brownfield land wherever possible	Area of previously developed land within the site	Yes – small part of the proposed development will be built on previously developed land
	Reduce the loss of and damage to the most versatile agricultural land	Area of grade 1/2 agricultural land within the site	No
		Area of contaminated land	Some sporadic contamination is likely
	Reduce the quantity of contaminated land	Part or all of site within Green Belt	No
		Within growth area	No

Key:

Positive

Not known

Potential Negative

Negative

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.²⁸

²⁸ Platt, S. (2007). *Lessons from Cambourne* [online] available at: www.inspire-east.org.uk/FileAccess.aspx?id=744 (accessed 15 August 2008).

3 Habitats Regulations Assessment

3.1 Introduction

3.1.1 This section sets out the Appropriate Assessment component of the HRA of the shortlisted eco-town location and associated development proposal at **Curborough**. Part I should be referred to for details of the assumptions and principles underlying this assessment.

3.1.2 The European sites that have been scoped in consideration for this eco-town are:

- River Mease SAC, located approximately 5km to the east;
- Cannock Chase SAC, located approximately 12km to the northwest; and
- Cannock Extension Canal SAC, located approximately 15km to the southwest.

3.1.3 European sites were scoped into each Appropriate Assessment using the distance criteria set out in the Introduction to the Draft 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.

3.1.4 There is also a long distance hydraulic connection with the Humber Estuary SPA, SAC & Ramsar site via the River Trent which passes through Staffordshire and ultimately drains to the estuary. Therefore, this site must also be considered within the assessment.

3.2 Assessment

Urbanisation

3.2.1 Given that the Curborough site lies 5km from the nearest European site, its development will not lead to adverse effects upon European sites as a result of the general 'urbanisation' impacts (e.g. arson, fly-tipping, car dumping etc) that can be suffered by those sites that lie very close to substantial settlements.

Recreational pressure

3.2.2 We have not been able, at this stage, to obtain accurate data on the recreational catchment for Cannock Chase SAC or the River Mease SAC, but the most recent England Day Visits survey (see Part I) indicated that recreational users would typically travel 17.2km to visit a 'countryside' site for the day. Cannock Chase SAC is within 17.2kms of Curborough.

- 3.2.3 Much of Cannock Chase SAC falls within a popular and well-used Country Park. Visitor pressures include dog walking, horse riding, mountain biking and off-track activities such as orienteering, all of which cause disturbance and result in erosion, new track creation and vegetation damage. Bracken invasion is significant, but is being controlled. High visitor usage and the fact that a significant proportion of the site is Common Land, requiring Secretary of State approval before fencing can take place, means that the reintroduction of sustainable management in the form of livestock grazing is problematical.
- 3.2.4 Given this, it is entirely possible that the eco-town would contribute, cumulatively with some of the additional 15,280 dwellings that will be constructed within the West Midlands under the RSS, to an overall increase in visitor pressure on Cannock Chase SAC and the River Mease SAC and would make the management of recreational pressure that much more challenging.

Local air quality

- 3.2.5 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 5km distant from the eco-town it can be concluded that there will be no such issues associated with Curborough. 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

- 3.2.6 The Curborough site lies within the Staffordshire Trent Valley Catchment Abstraction Management Strategies (CAMS) area. The Curborough Brook, which forms the western boundary of the site, is classified as main river down to the Sewage Treatment Works (STW). The River Trent is the nearest major surface watercourse. The Triassic Sherwood Sandstone aquifer forms the only major aquifer within the Staffordshire Trent Valley CAMS catchment. The aquifer is heavily licensed in many places, particularly for public water supply and underlies Cannock Chase SAC. The effects of this on the wetland features of the Chase are not fully understood at this time and it is therefore not possible to rule out adverse effects on this European site from increased abstraction to service the Curborough development.
- 3.2.7 The River Trent ultimately drains to the Humber Estuary SAC, SPA & Ramsar site near Scunthorpe, approximately 150km northeast of Curborough.

Although the distances involved render it highly unlikely that increased abstraction from the Trent to service the Curborough 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 Trent. These will be required to service some of the other new developments across the Midlands and Yorkshire & Humberside under the Regional Spatial Strategies (which together provide for an annual housing increase of 59,263 dwellings per annum), and within this context it is not possible to state that adverse effects will not occur.

- 3.2.8 While future abstraction from the River Mease to meet the water needs of the Curborough eco-town is not impossible, there is no indication of it as an option within the WRMP and it is highly likely that the Environment Agency would not approve such abstraction. If abstraction did take place from the river for this purpose, it is highly probable that adverse effects would result on the spined loach and bullhead populations for which the river is designated

Water quality

- 3.2.9 The nearest STW, to which the Curborough development is most likely to be connected, discharge to tributaries of the River Trent. The Trent does provide a hydraulic connection to the Humber Estuary.
- 3.2.10 There will be substantial dilution of any nitrate and ammonia contained in treated sewage effluent discharged to the Trent from the eco-town due to the presence of numerous tributaries between Curborough and the Humber Estuary. However, it is reasonable to conclude that some of these watercourses may themselves carry higher levels of phosphate 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 Curborough eco-town will contribute to heightened phosphate levels in all of these European sites (even though its individual contribution may well be small).
- 3.2.11 At this stage it is therefore not possible to conclude no adverse cumulative water quality effects on the Humber Estuary SPA.

Coastal squeeze

- 3.2.12 Not applicable, since the site is 150km from the nearest coastal European site (Dee Estuary SAC).

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 Curborough under the Eco-Towns Policy Statement will not lead to adverse effects on Cannock Chase SAC (as a result of recreational pressure and increased abstraction of water), the Humber Estuary SPA (as a result of increased abstraction of water and declining water quality) or the River Mease SAC (as a result of recreational pressure and increased abstraction of water).
- 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/enhance 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 Curborough eco-town would not lead to adverse effects on Cannock Chase SAC or the River Mease SAC 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 Draft PPS. These measures are given below.
- 3.4.2 There is a policy in the Draft PPS that states:
- “Forty per cent of the town’s total area should be allocated to green space of which at least half should be public and consist of a network of well managed, high quality green/open spaces which are linked to the wider countryside. Planning applications should demonstrate a range of types of green space, for example community forests, wetland areas and town squares. The space should be multifunctional, e.g. provide for play, recreation, wildlife, urban cooling and flood management.”*
- 3.4.3 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.

- 3.4.4 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 Draft 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.
- 3.4.5 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.
- 3.4.6 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 Draft 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.
- 3.4.7 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).

3.4.8 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 Curborough eco-town would not lead to adverse effects on Cannock Chase SAC or the Humber Estuary SPA as a result of additional demands on water resources, when considered in combination with all other developments across the area promoted by the RSS, without additional measures being included within the Draft 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 Draft PPS. The water efficiency and drainage policy in the Draft PPS does include two robust measures 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 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.

Water quality

3.4.12 It has not been possible to conclude with confidence that the Curborough eco-town would not lead to adverse effects on the Humber Estuary SPA 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 Draft 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:

- 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 is in place. Draft 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.

The Draft 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 Draft 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 LDF, 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 Regulation Assessment
IMD	Index of Multiple Deprivation
ISSET	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
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
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

