Communities and Local Government

eco-towns

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

Conclusions

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Prepared by Scott Wilson for Communities and Local Government

Conclusions

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 report

1.1.1 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 up to 10 schemes and ensure that development is underway by 2016 with the first potentially starting on site as early as 2010.

1.1.2 The locational chapters document the Sustainability Appraisal (SA) and Habitats Regulations Assessment (HRA) for each of the shortlisted locations and reasonable alternatives as appropriate. This report summarises the conclusions arising from the SA and HRA process and explores the potential cumulative effects arising from eco-towns from a regional perspective.

1.1.3 This report is structured as follows:

- Section 1 – Introduction
- Section 2 – Conclusions from the SA and HRA
- Section 3 – Cumulative effects

2 Conclusions from the SA and HRA

2.1 Introduction

2.1.1 As part of the SA process, the key strengths and weaknesses of each potential eco-town location were identified. In particular, the sustainability of each location was gauged with reference to a series of sustainability indicators linked to the appraisal criteria – see Table 1. On the basis of this information, each location was then graded A – C in terms of its suitability for an eco-town – see Table 2. The key strengths and weaknesses of each location and the grade given are set out in the section that follows together with a summary of the HRA findings. Section 2.3 summarises the grading for all the locations considered in the SA.

Table 1: Sustainability criteria

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

Table 2: Eco-towns grading

A	Generally suitable for an eco-town
B	Location might be suitable for an eco-town subject to meeting specific planning and design objectives
C	Location only likely to be suitable for an eco-town with substantial and exceptional innovation

2.2 SA and HRA Conclusions

Pennbury (Stoughton)

2.2.1 The **key strengths of the location** from a sustainability point of view are:

- Proximity to existing settlements at Leicester and Oadby provides strong opportunities to share and improve existing infrastructure, with potential sustainability benefits for existing and future populations. At the same time land ownership of the green wedge between Pennbury and Oadby will help to restrict growth and infill
- High potential for benefits through land and water quality improvements
- Leicester is an identified Growth Point, and a lack of affordable housing is a significant issue particularly in Harborough. It is difficult to say at this stage whether or not the proposal will provide truly affordable housing that is accessible to those who need it – ie residents of Oadby and Wigston and of Leicester City – but the eco-town could make a significant contribution to affordable housing, especially through the

application of recently developed English Partnerships intermediate housing models

- The location has been identified as an area of solar and wind energy potential, and the close proximity to Leicester means that there is potential to connect to a district heating system in Leicester maximising efficiency and minimising waste energy.

2.2.2 The **key weaknesses of the location** from a sustainability point of view are:

- The two main roads going into Leicester which run alongside and through the proposed location are generally acknowledged to be at capacity during peak flows, and car use in the existing area is notably high. Therefore the public transport solution is the key element of the scheme in terms of the need for excellent access to the city centre, rail transport, and improved services for satellite rural settlements. The planning of a tram or rapid bus route to the edge of Leicester is relatively easy, but the second part of the route into central Leicester is more difficult. This is essential in ensuring a low carbon development
- There is a major resource issue with regard to impacts on existing waste and water infrastructure which are already at capacity. This can be overcome to a certain extent through measures incorporated into the design, but a full solution will potentially require improvements to infrastructure in the region
- Potential flooding downstream at Great Glen as a result of surface water run off is certainly an issue but can be mitigated with the potential for net benefits
- Despite the focus of development at the airfield site, development of greenfield land is considerable
- The rural tranquil landscape will experience a high magnitude of change
- Public perception, attitudes and issues of community cohesion will require careful attention and will be important in ensuring that the scheme is successful.

2.2.3 Table 3 sets out the assessment of Pennbury (Stoughton) in relation to a series of key sustainability indicators.

Table 3: Sustainability of Pennbury (Stoughton) as an eco-town location

SA Issue	Site Specific Issues	Indicators	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, but Kilby-Foxton Canal SSSI adjacent to the southern boundary – unfavourable and declining condition
		Presence of priority habitats/species	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 – 2% of 1729 Ha site is at highest risk of flooding
		Area of flood risk 3 adjacent to the site	Yes, but exact area unclear Greatest Flood Risk is at Great Glen to the south of the site
Climate change mitigation	Maximise use of renewable energy	Potential of the site for renewable energy	Yes – potential for wind
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, but east of the location, from Houghton on the Hill and Little Stretton is designated as An Area of Particularly Attractive Countryside
		Listed buildings/ ancient monuments within or adjacent to the site	Yes – many listed buildings and ancient monuments within the site
Water resources and water quality	Minimise impacts on water resources and water quality	Water supply status	The site falls within an EMRZ which currently has a supply/demand defecit
		STW capacity	Not known

Table 3: Sustainability of Pennbury (Stoughton) as an eco-town location *(continued)*

SA Issue	Site Specific Issues	Indicators	Comment
Community infrastructure/ wellbeing	Utilise existing infrastructure within its capacity Complement broader planning policies/ objectives	Will contribute to retaining character of higher order centre	Not known
		Will facilitate regeneration	Yes – in particular transport infrastructure
		Within or adjacent to Air Quality management Area (AQMA)	NO_2 AQMA in a large section of Leicester City Centre and along a number of its radial roads and sections of the ring road
Decent and affordable homes	Meet housing need	Demand for housing	Yes – the District will incur a shortfall in housing supply against the housing projections
		Demand for affordable housing	Yes – affordable housing targets are not being met within either Harborough DC or Leicester City
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)	Leicester City centre c.6.5km (4 miles)
		Proximity to railway station (distance)	Leicester City Rail station 6.5km (4 miles)
		Proximity to existing sources of employment (scale/ distance)	Leicester City centre c.6.5km (4 miles)
		Proximity to motorway/strategic road network (distance)	A6 c.3km (2 miles) A47 c.2km (1.25 miles) M1 c.12km (7.5 miles)

Table 3: Sustainability of Pennbury (Stoughton) as an eco-town location *(continued)*

SA Issue	Site Specific Issues	Indicators	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	Some, however, not accurately specified
		Area of grade 1/2 agricultural land within the site	Not known
		Area of contaminated land	Exact area unclear – potential for a significant area of contaminated land
		Part or all of site within Green Belt	No
		Within growth area	Leicester is an identified Growth Point

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

2.2.4 With reference to the sustainability indicators in Table 3, Pennbury (Stoughton) was assessed as:

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

2.2.5 In relation to the HRA and impacts on European wildlife sites, it is not possible at this stage to say with confidence that the development that may be delivered at Pennbury (Stoughton) would not lead to adverse effects on Rutland Water SPA and Ramsar site as a result of recreational pressure or on European sites as a result of increased abstraction or on the Humber Estuary as a result of cumulative deterioration in water quality. Additional measures are therefore required within the PPS to give greater certainty that adverse effects will not result (see the SA and HRA of the Draft PPS).

Middle Quinton

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

- This is a brownfield development and there is potential to develop the functioning of the existing recycling plant
- There are a range of ecological considerations, but development of the site would not necessarily result in the loss of an established ecologically coherent landscape. There is the potential for biodiversity enhancement

- There is the potential for links to nearby academic institutions as well as potential to capitalise on the local horticulture and food production industries
- A rail station is located relatively nearby. It should be possible to develop rapid transport systems between key destinations including the rail-station
- An existing well used cycle route runs between the site and Stratford. There may be the potential for a rapid transport system to run along this route as well as retaining a cycleway.

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

- This site conflicts with the strategic plans for growth and regeneration at the regional and local level. The local area is affluent and not in need of regeneration
- This is a rural area and there is the potential for an eco-town to impact upon rural communities and economies
- The site is remote from any city or major town, which could result in long-distance travel by car
- Those likely to locate to the eco-town because of the offer of affordable housing are likely to move from the wider region rather than the local area (although there is a considerable need associated with Stratford). This could have an affect on local economies and sustainable transport patterns
- About 700 people are employed on the site currently. The majority of these jobs may be lost
- There is a degree of land contamination, although this can be mitigated.

2.2.8 Table 4 sets out the assessment of Middle Quinton in relation to a series of key sustainability indicators.

Table 4: Sustainability of Middle Quinton as an eco-town location

SA Issue	Site Specific Issues	Indicators	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
		Presence of priority habitats/species	Yes – locally valuable habitats, as well as BAP priority and protected species on-site
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, but small area
		Area of flood risk 3 adjacent to the site	Yes
Climate change mitigation	Maximise use of renewable energy	Potential of the site for renewable energy	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	Yes – the site can be clearly seen from the Cotswolds AONB although the existing land uses are also detrimental to views
		Listed buildings/ ancient monuments within or adjacent to the site	No, but one building adjacent to site
Water resources and water quality	Minimise impacts on water resources and water quality	Water supply status	Not known
		STW capacity	Yes – some capacity, not a major constraint
Community infrastructure/ wellbeing	Utilise existing infrastructure within its capacity Complement broader planning policies/ objectives	Will contribute to retaining character of higher order centre	Not known
		Will facilitate regeneration	Yes – of site
		Within or adjacent to Air Quality management Area (AQMA)	Yes – NO_2 AQMA in Evesham along Port Street between Waterside and Shor Street – main access into Evesham from eco-town
Decent and affordable homes	Meet housing need	Demand for housing	Yes – high
		Demand for affordable housing	Yes – high

Table 4: Sustainability of Middle Quinton as an eco-town location

SA Issue	Site Specific Issues	Indicators	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)	Stratford-upon-avon c.9.5km (6 miles) Warwick c.22.5km (14 miles)
		Proximity to railway station (distance)	Honeybourne c.6.5km (4 miles)
		Proximity to existing sources of employment (scale/ distance)	Stratford c.9.5km (6 miles)
		Proximity to motorway/strategic road network (distance)	A46 c.10.5km (6.5 miles)
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
		Area of grade 1/2 agricultural land within the site	No
		Area of contaminated land	Yes
		Part or all of site within Green Belt	No
		Within growth area	No

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

2.2.9 With reference to the sustainability indicators in Table 4, Middle Quinton was assessed as:

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

2.2.10 In relation to the HRA and impacts on European wildlife sites, it has not proven possible to say that the development that may be delivered at Middle Quinton would not lead to adverse effects on the Severn Estuary SPA/SAC as a result of increased abstraction or a cumulative decline in water quality. Additional measures are therefore required within the PPS to give greater certainty that adverse effects will not result (see the SA and HRA of the Draft PPS).

Whitehill-Bordon

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

- Development here is seen as complementing regional and local planning objectives, including the economic objectives for the Western Corridor/ Blackwater Valley sub-region
- There is a need for regeneration, which will worsen when the MoD leaves
- Expansion of Whitehill-Bordon offers an opportunity to make the settlement more sustainable in relation to increasing local accessibility to jobs, services and facilities and thereby helping to reduce existing high levels of car dependency
- This is an opportunity for the redevelopment of brownfield and public sector land
- There is excellent access to high quality and biodiversity rich countryside, not least the proposed South Downs National Park
- There is a good degree of existing community support.

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

- There is potential for a range of significant biodiversity effects unless carefully managed and mitigated
- There are existing unsustainable transport patterns and more general lifestyle patterns amongst residents of Whitehill-Bordon.
- Trying to create an eco-town by grafting on development to an existing town will pose particular challenges and it may be more difficult to achieve a strong sense of living within an eco-town
- Higher order settlements are distant and it is not clear that the eco-town can be linked to higher order settlements in such a way that will make sustainable transport an attractive option.
- The potential for extracting minerals prior to development will need to be examined to avoid sterilisation of the resource

2.2.13 Table 5 sets out the assessment of Whitehill-Bordon in relation to a series of key sustainability indicators.

Table 5: Sustainability of Whitehill-Bordon as an eco-town location

SA Issue	Site Specific Issues	Indicators	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	Yes
		Presence of priority habitats/species	Yes
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, but small
		Area of flood risk 3 adjacent to the site	Yes
Climate change mitigation	Maximise use of renewable energy	Potential of the site for renewable energy	Yes, but average
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	Yes
		Listed buildings/ ancient monuments within or adjacent to the site	Yes
Water resources and water quality	Minimise impacts on water resources and water quality	Water supply status	Not known
		STW capacity	Yes
Community infrastructure/ wellbeing	Utilise existing infrastructure within its capacity Complement broader planning policies/ objectives	Will contribute to retaining character of higher order centre	Yes – to smaller settlements in East Hampshire
		Will facilitate regeneration	Yes
		Within or adjacent to Air Quality management Area (AQMA)	No
Decent and affordable homes	Meet housing need	Demand for housing	Yes
		Demand for affordable housing	No

Table 5: Sustainability of Whitehill-Bordon as an eco-town location (*continued*)

SA Issue	Site Specific Issues	Indicators	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)	Farnham, Petersfield c.11km (7 miles)
		Proximity to railway station (distance)	Liphook c.6.5km (4 miles)
		Proximity to existing sources of employment (scale/ distance)	Some existing employment in Bordon, other employment in higher order centres c.11km (7 miles)
		Proximity to motorway/strategic road network (distance)	A3 c.4km (2.5 miles)
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
		Area of grade 1/2 agricultural land within the site	No
		Area of contaminated land	Yes
		Part or all of site within Green Belt	No
		Within growth area	No

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

2.2.14 With reference to the sustainability indicators in Table 5, Whitehill-Bordon was assessed as:

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

2.2.15 In relation to the HRA and impacts on European wildlife sites, it has not proven possible to say that the development that may be delivered at Bordon-Whitehill would not lead to adverse effects on Woolmer Forest SAC, Wealden Heaths Phase 2 SPA, East Hampshire Hangers SAC, Shortheath Common SAC, Thursley, Ash, Pirbright & Chobham SAC, Thursley, Hankley & Frensham Commons SPA and Ebernoe Common SAC as a result of increased recreational pressure or on Wealden Heaths SPA as a result of urbanisation. It was also not possible to rule out adverse effects on Woolmer Forest SAC, Wealden Heaths Phase 2 SPA and Shortheath Common SAC as a result of deteriorating air quality. It was also impossible to rule out adverse effects on European sites as a result of increased abstraction. Additional measures are therefore required within the PPS to give greater certainty that adverse effects will not result (see the SA and HRA of the Draft PPS).

Weston Otmoor and Cherwell

Weston Otmoor

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

- The provision of affordable and commercial housing in an area of extreme housing pressure
- The proximity to the Oxford-Milton Keynes railway

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

- Almost entirely green field
- 30 per cent of the site falls within the Oxford Green Belt
- High grade and versatile agricultural land (grade 2)
- The site incorporates Ancient Woodland, and parts of two SSSIs. A further SSSI (Otmoor) could be affected
- The area is identified as an area of 'serious' water stress
- It is close to Bicester and has the potential to prejudice current development plans for the town, and
- It is close to a congested road junction on the M40 and A34 which may both encourage commuting and exacerbate congestion.

Shipton

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

- The provision of affordable and commercial housing in an area of extreme housing pressure
- The proximity to the Southampton-Birmingham railway
- Regeneration of a disused quarry, defined as previously developed land.

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

- The proposed location contains a geological SSSI, although 98 per cent is described as unfavourable, declining condition and measures have been agreed to enhance the SSSI through further rock exposures
- The ecological importance of the County Wildlife Site (although development affecting the site has already been agreed)
- A significant proportion of the site falls within the Oxford Green Belt but the acceptability of development in the quarry, within the Green Belt, has been accepted
- The area is identified as an area of 'serious' water stress, and
- It is close to Bicester and has the potential to prejudice current development plans for the town.

North West Bicester

2.2.20 The key **strength** of the location from a sustainability viewpoint are:

- The location is not constrained by environmental designations or high quality the agricultural land falls.

2.2.21 The key **weakness** of the location from a sustainability vewpoint is:

- The fact that the site is adjacent to Bicester will mean that it is less separate and distinct that if it were more removed. This may lessen infrastructure innovation (easier to use existing systems), lessen behavioural change (Bicester is on the doorstep) and make the creation of a distinct community more difficult.

2.2.22 Table 6 sets out the assessment of Weston Otmoor and reasonable alternatives in relation to a series of key sustainability indicators.

Table 6: Sustainability of Weston Otmoor and alternatives as an eco-town location

SA Issue	Site Specific Issues	Indicators	Weston Otmoor	Shipton	North West Bicester
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	Yes – Wendlebury Meads and Mansmoor Closes SSSI is located approximately 1km east of the site location Western Fens SSSI is just northwest of the site location	Yes, but a geological SSSI based on rock exposures	No
		Presence of priority habitats/ species	Yes – the nationally protected Brown and Black hairstreak butterflies are found on the SSSI and in the surrounding area Also locally protected species identified by TVERC[1]	No, but habitat of local importance	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 – small part of the site is within FZ3, the majority of the site is FZ1	No	No – the majority of the site is FZ1
		Area of flood risk 3 adjacent to the site	Yes	No	No
Climate change mitigation	Maximise use of renewable energy	Potential of the site for renewable energy	Not known	Not known	Not known

[1] TVREC – Thames Valley Environmental Record Centre

Table 6: Sustainability of Weston Otmoor and alternatives as an eco-town location *(continued)*

SA Issue	Site Specific Issues	Indicators	Weston Otmoor	Shipton	North West Bicester
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	Yes – adjacent to the Cherwell Valley Area of Landscape Importance	No
		Listed buildings/ ancient monuments within or adjacent to the site	No, but the adjacent village of Weston on the Green is designated a Conservation Area and contains 32 listed buildings To the SE is Otley Grange SAM	No, but Conservation Areas within local villages	No
Water resources and water quality	Minimise impacts on water resources and water quality	Water supply status	Aquifer fully committed	Aquifer fully committed	Aquifer fully committed
		STW capacity	New STW required	New STW required	Not known
Community infrastructure/ wellbeing	Utilise existing infrastructure within its capacity Complement broader planning policies/ objectives	Will contribute to retaining character of higher order centre	Yes – Oxford	Yes – Oxford	Yes – Oxford
		Will facilitate regeneration	No – may prejudice development of Bicester	Yes – the site	Yes – Bicester
		Within or adjacent to Air Quality management Area (AQMA)	2 NO_2 AQMAs including a number of roads in Oxford City centre and the area encompassing the Green Road Roundabout at Headington	2 NO_2 AQMAs including a number of roads in Oxford City centre and the area encompassing the Green Road Roundabout at Headington	2 NO_2 AQMAs including a number of roads in Oxford City centre and the area encompassing the Green Road Roundabout at Headington

Table 6: Sustainability of Weston Otmoor and alternatives as an eco-town location *(continued)*

SA Issue	Site Specific Issues	Indicators	Weston Otmoor	Shipton	North West Bicester
Decent and affordable homes	Meet housing need	Demand for housing	Yes – the whole of Oxfordshire is an area of extreme housing pressure	Yes – the whole of Oxfordshire is an area of extreme housing pressure	Yes – the whole of Oxfordshire is an area of extreme housing pressure
		Demand for affordable housing	Yes – delivery of affordable housing is a big issue for the local authority	Yes – delivery of affordable housing is a big issue for the local authority	Yes – affordable housing is a significant issue for the authority and the South East

Table 6: Sustainability of Weston Otmoor and alternatives as an eco-town location *(continued)*

SA Issue	Site Specific Issues	Indicators	Weston Otmoor	Shipton	North West Bicester
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)	Oxford c.11km (7 miles) Bicester c.5km (3 miles)	Oxford c. 10km (6 miles) Witney c. 16km (10 miles)	Oxford c.17km (10.5 miles) Adjacent to Bicester
		Proximity to railway station (distance)	Bicester c.5km (3 miles) A new railway station is proposed as part of the proposal, providing connection to Oxford, Bicester, London and Milton Keynes	A new railway station is proposed providing connection to Oxfgord, Banbury and Birmingham	Bicester c.2km (1.2 miles)
		Proximity to existing sources of employment (scale/ distance)	Oxford c.11km (7 miles) Significant employment is proposed for Bicester through the emerging regional and local planning guidance	Oxford c. 13km (8 miles) Banbury c. 25km (15.5 miles)	Significant employment is proposed for Bicester through the emerging regional and local planning guidance Oxford c.17km (10.5 miles
		Proximity to motorway/ strategic road network (distance)	Adjacent to the M40 and bisected by the A34 The proposal puts forward rebuilding J9 of the M40, car access to the site will be strictly controlled J9 currently suffers from severe capacity issues	A34 c. 8km (5 miles) M40 c. 16km (10 miles)	M40 c6km (4 miles)

Table 6: Sustainability of Weston Otmoor and alternatives as an eco-town location *(continued)*

SA Issue	Site Specific Issues	Indicators	Weston Otmoor	Shipton	North West Bicester
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	Limited	Major part of site is brownfield and derelict	Not known
		Area of grade 1/2 agricultural land within the site	No – Grade 3	NO	None
		Area of contaminated land	No significant areas of contamination within the site or district Some old landfill sites fall within the location boundary	Yes, but small	Not known
		Part or all of site within Green Belt	Yes, approximately 30%	Yes	No
		Within growth area	No	No	No

Key:			
Positive	Not known	Potential Negative	Negative

2.2.23 With reference to the sustainability indicators in Table 6, the alternatives for Weston-Otmoor and Cherwell were assessed as:

Weston Otmoor

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

Shipton

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

North West Bicester

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

2.2.24 In relation to the HRA and impacts on European wildlife sites, it has not proven possible to say that the development that may be delivered at **Weston Otmoor** under the Eco-Towns Policy Statement will not lead to adverse effects on Oxford Meadows SAC or Cothill Fen SAC (as a result of recreational pressure). It has also not been possible to conclude that development at **Shipton** or **North-West Bicester** will not lead to adverse effects on the Oxford Meadows SAC as a result of recreational pressure. Additional measures are therefore required within the PPS to give greater certainty that adverse effects will not result (see the SA and HRA of the Draft PPS).

Ford

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

- The limited landscape, ecological and historic interest of the site and the potential to create ecological gain
- The proximity of the railway station.

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

- Potentially severe congestion on the surrounding road network and a heightened need for an A27 bypass at Arundel
- It is almost entirely green field
- It is high grade agricultural land
- Although the area is not designated there is still a potential to change the setting and character of local villages (eg Climping and Yapton)
- Issues of flood risk – particularly ground water – but should be manageable with thorough assessment and development proposals.

2.2.27 Table 7 sets out the assessment of Ford in relation to a series of key sustainability indicators.

Table 7: Sustainability of Ford as an eco-town location

SA Issue	Site Specific Issues	Indicators	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 – but South Downs to North and Climping SSSI to South
		Presence of priority habitats/species	Yes

Table 7: Sustainability of Ford as an eco-town location *(continued)*

SA Issue	Site Specific Issues	Indicators	Comment
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 – approximately 15%
		Area of flood risk 3 adjacent to the site	Yes
Climate change mitigation	Maximise use of renewable energy	Potential of the site for renewable energy	Yes – potential from hydro, waste and solar
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
		Listed buildings/ ancient monuments within or adjacent to the site	No, but SAM at Climping; adjacent listed buildings; Arundel historic value
Water resources and water quality	Minimise impacts on water resources and water quality	Water supply status	Area of water stress but provision should be adequate
		STW capacity	Yes – onsite
Community infrastructure/ wellbeing	Utilise existing infrastructure within its capacity Complement broader planning policies/ objectives	Will contribute to retaining character of higher order centre	Not known
		Will facilitate regeneration	No
		Within or adjacent to Air Quality management Area (AQMA)	No
Decent and affordable homes	Meet housing need	Demand for housing	Yes
		Demand for affordable housing	Yes

Table 7: Sustainability of Ford as an eco-town location *(continued)*

SA Issue	Site Specific Issues	Indicators	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)	Arundel c.3km (2 miles) Littlehampton c.4km (2.5 miles) Bognor Regis c.6.5km (4 miles) Chichester c.15km (9.3 miles)
		Proximity to railway station (distance)	Station located at Ford and proposed on-site
		Proximity to existing sources of employment (scale/ distance)	Some existing employment within site and immediate surroundings
		Proximity to motorway/strategic road network (distance)	A27 c.5km (3 miles) Immediate vicinity: A259 south and B2132 & B2233 to west
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 – approximately 30%
		Area of grade 1/2 agricultural land within the site	Yes
		Area of contaminated land	Not known
		Part or all of site within Green Belt	No
		Within growth area	No

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

2.2.28 With reference to the sustainability indicators in Table 7, Ford was assessed as:

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

2.2.29 In relation to the HRA and impacts on European wildlife sites, it has not proven possible to say that the development that may be delivered at Ford would not lead to adverse effects on Arun Valley SPA, Duncton to Bignor Escarpment SAC, Pagham Harbour SPA or Chichester & Langstone Harbours SPA as a result of recreational pressure, without further amendments to the PPS, or on European sites as a result of increased abstraction. Additional measures are therefore required within the PPS to give greater certainty that adverse effects will not result (see the SA and HRA of the Draft PPS).

St Austell (China Clay Community)

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

- The limited landscape, ecological and historic interest of the site and the potential to create ecological and biodiversity gain
- The potential for renewable energy generation including wind, wave, tidal, geo and solar thermal and PV technologies
- The opportunity to provide additional services and community infrastructure closer to existing rural residents who may otherwise travel greater distances to meet their needs
- The potential development of Imerys' existing road infrastructure to help manage traffic demand
- Small development sites are likely to result in relatively lower impacts on existing communities.

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

- Development over several sites is unlikely to deliver the critical mass required to support a stand alone sustainable community
- Individual sites will not have critical mass and will have to rely on existing neighbourhood infrastructure and local towns
- Poor local and regional road networks are already severely congested with existing users
- Limited and/or no rail connectivity between the development sites and local centres
- The likelihood of high car dependency.

2.2.32 Table 8 sets out the assessment of St Austell (China Clay Community) in relation to a series of key sustainability indicators.

Table 8: Sustainability of St Austell (China Clay Community) as an eco-town location

SA Issue	Site Specific Issues	Indicators	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	There is one small SSSI close to the proposed development site at Baal
		Presence of priority habitats/species	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	Not known
		Area of flood risk 3 adjacent to the site	Not known
Climate change mitigation	Maximise use of renewable energy	Potential of the site for renewable energy	Yes – opportunities for wind, wave, tidal, hydro, geothermal and solar technologies
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
		Listed buildings/ ancient monuments within or adjacent to the site	No
Water resources and water quality	Minimise impacts on water resources and water quality	Water supply status	Available
		STW capacity	Not known
Community infrastructure/ wellbeing	Utilise existing infrastructure within its capacity Complement broader planning policies/ objectives	Will contribute to retaining character of higher order centre	Yes – St Austell
		Will facilitate regeneration	Yes
		Within or adjacent to Air Quality management Area (AQMA)	No
Decent and affordable homes	Meet housing need	Demand for housing	Yes
		Demand for affordable housing	Yes – affordable housing provision lags behind targets

Table 8: Sustainability of St Austell (China Clay Community) as an eco-town location *(continued)*

SA Issue	Site Specific Issues	Indicators	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)	St Austell c.9.5km (6 miles)
		Proximity to railway station (distance)	St Austell c.8km (5 miles)
		Proximity to existing sources of employment (scale/ distance)	St Austell c.8km (5 miles)
		Proximity to motorway/strategic road network (distance)	A30 c.16km (10 miles)
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	Equivalent to 100%
		Area of grade 1/2 agricultural land within the site	No
		Area of contaminated land	Not known
		Part or all of site within Green Belt	No
		Within growth area	Yes

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

2.2.33 With reference to the sustainability indicators in Table 8, St Austell (China Clay Community) was assessed as:

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

2.2.34 In relation to the HRA and impacts on European wildlife sites, it has not proven possible to say that the development that may be delivered at St. Austell would not lead to material adverse effects on Breney Common and Goss and Tregoss Moors SAC, Polruan to Polperro SAC, Newlyn Downs SAC, River Camel SAC or Fal and Helford SAC as a result of recreational pressure or St Austell Clay Pits as a result of urbanisation and deteriorating local air quality. Additional measures are therefore required within the PPS to give greater certainty that adverse effects will not result (see the SA and HRA of the Draft PPS).

Rossington

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

- All the new development will take place on brownfield or previously developed land
- The limited landscape, ecological and historic interest of the development site itself, means there is significant potential to create ecological and landscape gain
- There are a number of employment centres close to the eco-town, including the local airport, Doncaster Lakeside Business Park and a potential inland port which could create 4,000 jobs
- Doncaster is within one of the Government's new 'Growth Points'.

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

- The most significant public water supply within the Idle and Torne CAMS area (where the eco-town lies) is the Sherwood aquifer, which is currently over licensed and over abstracted
- Reducing the potential adverse impact on the local road network arising from the development of the eco-team is not dependent on the delivery of the Finningley and Rossington Regeneration Route Scheme (FARRRS) in the entirety, but upon an initial stage of the link road. It should therefore be noted that bringing forward the eco-town major road building may be required, which for the most part will be open to the private car.
- There is potential conflict between the Proponent's aspirations to develop a heat loop system and the Environment Agency's concerns over the potential impacts on groundwater
- Elevated contaminants on site means that remediation of the land could be challenging and costly.

2.2.37 Table 9 sets out the assessment of Rossington in relation to a series of key sustainability indicators.

Table 9: Sustainability of Rossington as an eco-town location

SA Issue	Site Specific Issues	Indicators	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	Yes, adjacent
		Presence of priority habitats/species	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	No
		Area of flood risk 3 adjacent to the site	Yes – flooding problems on the western side of the River Torne (eco-town is on the east side)
Climate change mitigation	Maximise use of renewable energy	Potential of the site for renewable energy	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
		Listed buildings/ ancient monuments within or adjacent to the site	No, but some ancient monuments and listed buildings nearby
Water resources and water quality	Minimise impacts on water resources and water quality	Water supply status	Aquifer over-abstracted and over-licensed
		STW capacity	New STW required
Community infrastructure/ wellbeing	Utilise existing infrastructure within its capacity Complement broader planning policies/ objectives	Will contribute to retaining character of higher order centre	No
		Will facilitate regeneration	Yes
		Within or adjacent to Air Quality management Area (AQMA)	4 NO_2 AQMAs covering parts of central Doncaster and sections of the surrounding road network

Table 9: Sustainability of Rossington as an eco-town location *(continued)*

SA Issue	Site Specific Issues	Indicators	Comment
Decent and affordable homes	Meet housing need	Demand for housing	Yes, but Doncaster is currently exceeding its annual housing provision requirement by around 16%
		Demand for affordable housing	Yes – lack of affordable housing identified
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)	Doncaster c.9.5km (6 miles)
		Proximity to railway station (distance)	Doncaster 9.5km (6 miles) Proposed new train station in Auckley c.6km (4 miles)
		Proximity to existing sources of employment (scale/ distance)	Employment areas on site (mainly the Bankwood Estate) Off-site employment areas include the Robin Hood Airport c.5km (3 miles) and Doncaster Lakeside Business Park c.3km (2 miles)
		Proximity to motorway/strategic road network (distance)	3km (2 miles) to B6463 15km (9 miles) to M18
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 – all development on previously developed except the Public Park and wetland area
		Area of grade 1/2 agricultural land within the site	No
		Area of contaminated land	Yes
		Part or all of site within Green Belt	No
		Within growth area	Yes

Key:			
Positive	Not known	Potential Negative	Negative

2.2.38 With reference to the sustainability indicators in Table 9, Rossington was assessed as:

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

2.2.39 In relation to the HRA and impacts on European wildlife sites, it has not proven possible to say that the development that may be delivered at Rossington would not lead to adverse effects on Thorne Moor SAC, Hatfield Moor SAC or Thorne and Hatfield Moors SPA as a result of recreational pressure. It was also not possible to rule out adverse effects upon European sites as a result of increased abstraction or on the Humber Estuary as a result of deteriorating water quality. Additional measures are therefore required within the PPS to give greater certainty that adverse effects will not result (see the SA and HRA of the Draft PPS).

Hanley Grange and Cambridgeshire

Hanley Grange

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

- Its location in a growth area and area of housing need
- Its proximity to railway stations
- Its proximity to existing sources of employment
- The potential for links with science and engineering therefore attractive to emerging 'eco-industries, and
- The Cambridge context as a place of learning and innovative excellence could help to give the town an immediate identity and attract educated professionals willing to buy into the eco-towns concept and to adopt more sustainable lifestyles.

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

- It is predominantly Grade 2 agricultural land
- There is no previously developed land present within the site
- Its proximity to the M11 could encourage long-distance commuting
- The unresolved questions about how to avoid harm to the underlying aquifer and how to secure sustainable water supplies in this area of water stress
- The potential conflicts with current development and investment policies for growth around Cambridge, and
- The potential to impact upon SSSIs and the potential, more generally, for impacts in an area of relatively high landscape and biodiversity value.

Waterbeach

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

- The potential for travel by sustainable modes of transport and opportunities to promote multi-modal travel
- The proposed development is in a location with a minimal flood risk
- A sustainable waste management strategy which includes a link with the Cambridge Recycling Centre and the utilisation of energy through methane gas and a CHP.

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

- Substantial water concerns with sourcing the supply in an area under water stress and with the potential for cumulative impacts from other planned developments in the region
- Drainage issues with the discharge of effluent as there are no water courses in the locality
- The loss of agricultural land and wildlife habitats
- Already severe transport capacity issues within the area, particularly on the road network
- The impact of the development on the setting of Denny Abbey.

Alconbury

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

- The site is publicly-owned previously developed land/brownfield, disused/ under-developed in parts and not visually-obtrusive. It has the potential for landscaping and development in re-alignment with the surrounding historical and landscape context
- The potential to develop links on the East Coast Main Line
- The potential to reconnect the site with the surrounding area (ecology, heritage and settlements)
- The location has been previously identified for its employment, waste facilities and residential development potential.

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

- There are several SAMs and listed buildings in close proximity to the site including listed structures within the site and a sensitive historical context onsite and in the surrounding area
- The adjacent strategic road network can be congested and may encourage commuting and car-use.

2.2.46 Table 10 sets out the assessment of Hanley Grange and reasonable alternatives in relation to a series of key sustainability indicators.

Table 10: Sustainability of Hanley Grange, Waterbeach and Alconbury as eco-town locations

SA Issue	Site Specific Issues	Indicators	Hanley Grange Comment	Waterbeach Comment	Alconbury 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, but a number nearby have the potential to be impacted	No, but SSSIs along river Cam nearby	No, but SSSI/ NNR to north and SSSI on SE edge of site boundary. County Wildlife Site
		Presence of priority habitats/species	Yes – some priority species making use of site and surrounding area	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 – small area	Yes – small area	No
		Area of flood risk 3 adjacent to the site	Yes	Yes	No
Climate change mitigation	Maximise use of renewable energy	Potential of the site for renewable energy	Yes, but average	Not known	Yes, but average – wind and biomass potential
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
		Listed buildings/ ancient monuments within or adjacent to the site	Yes – part of Brent Ditch SAM within site and 3 SAMs nearby	Yes – Denny Abbey & Car Dyke SAMs nearby	Yes – listed buildings on site one SAM adjacent to site

Table 10: Sustainability of Hanley Grange, Waterbeach and Alconbury as eco-town locations *(continued)*

SA Issue	Site Specific Issues	Indicators	Hanley Grange Comment	Waterbeach Comment	Alconbury Comment
Water resources and water quality	Minimise impacts on water resources and water quality	Water supply status	Water stressed aquifer	Cherry Hinton Reservoir proposed – to be assessed	Not an area of water shortage
		STW capacity	No major constraints	Yes – Capacity at Cambridge STW	Not known
Community infrastructure/ wellbeing	Utilise existing infrastructure within its capacity Complement broader planning policies/ objectives	Will contribute to retaining character of higher order centre	Yes	Yes	Yes
		Will facilitate regeneration	No	Not known	Yes
		Within or adjacent to Air Quality management Area (AQMA)	NO_2 AQMA along A14 between Bar Hill and Milton	NO_2 AQMA along A14 between Bar Hill and Milton	NO_2 AQMAs in Huntingdon, Brampton and Hemmingford to Fenstanton
Decent and affordable homes	Meet housing need	Demand for housing	Yes	Yes	Yes
		Demand for affordable housing	Yes	Yes	Yes

Table 10: Sustainability of Hanley Grange, Waterbeach and Alconbury as eco-town locations *(continued)*

SA Issue	Site Specific Issues	Indicators	Hanley Grange Comment	Waterbeach Comment	Alconbury 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)	Cambridge c.14.5km (9 miles)	Cambridge c.14.5km (9 miles)	Huntingdon 9.5km (6 miles) Peterborough c.26km (16 miles) Cambridge c.35km (22 miles)
		Proximity to railway station (distance)	Whittlesford Parkway c.2.5km (1.5 miles)	Waterbeach c.1km (0.6 miles)	Huntingdon c.8km (5 miles)
		Proximity to existing sources of employment (scale/distance)	c.1km (0.6miles)	Cambridge Research Park c.2km (3 miles) Adjacent to Denny End Industrial Estate	Adjacent to a local employment site (~1,100 jobs)
		Proximity to motorway/ strategic road network (distance)	Adjacent to A11 and M11 c.2km (1.2 miles)	Adjacent to A10 and A14 c.4.5km (3 miles)	Adjacent to A1(M) and A14
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	No	Yes – 109ha/ 600ha	Yes
		Area of grade 1/2 agricultural land within the site	Yes	No	No
		Area of contaminated land	No	Yes – some near disused airstrip	Not known
		Part or all of site within Green Belt	No	No	No
		Within growth area	Yes	Yes	Yes

Key:

Positive	Not known	Potential Negative	Negative

2.2.47 With reference to the sustainability indicators in Table 10, the alternatives for Hanley Grange and Cambridgeshire were assessed as:

Hanley Grange

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

Alconbury

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

Waterbeach

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

2.2.48 In relation to the HRA and impacts on European wildlife sites, the following conclusions apply:

- **Hanley Grange** – it has not proven possible to say that the development that may be delivered at Hanley Grange will not lead to adverse effects on Devils Dyke SAC and Eversden and Wimpole Woods SAC as a result of recreational pressure or on the Ouse Washes SAC/SPA and Ramsar site and The Wash and North Norfolk Coast SAC/SPA and Ramsar site as a result of increased abstraction or deteriorating water quality;
- **Alconbury** – it has not proven possible to say that the development that may be delivered at Alconbury will not lead to adverse effects on Portholme SAC and the Ouse Washes SAC/SPA and Ramsar site as a result of recreational pressure. In addition it has not proven possible to conclude that Alconbury will not have a cumulative effect upon Portholme SAC, The Ouse Washes SAC/SPA and Ramsar site and The Wash and North Norfolk Coast SAC/SPA and Ramsar site as a result of increased abstraction or deteriorating water quality;
- **Waterbeach** – it has not proven possible to say that the development that may be delivered at Waterbeach will not lead to adverse effects on Devils Dyke SAC and the Ouse Washes SAC/SPA and Ramsar site as a result of recreational pressure. In addition it has not proven possible to conclude that Waterbeach will not have a cumulative effect upon Portholme SAC, The Ouse Washes SAC/SPA and Ramsar site and The Wash and North Norfolk Coast SAC/SPA and Ramsar site as a result of increased abstraction or deteriorating water quality.

Additional measures are therefore required within the PPS to give greater certainty that adverse effects will not result from the three alternatives (see the SA and HRA of the Draft PPS).

Marston Vale

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

- The limited landscape interest of the site
- The potential to create ecological gain
- The potential to retain and conserve features of historic interest
- The proximity to Marston Vale Community Forest for leisure and recreation pursuits
- The proximity of the railway stations
- The potential to locate development away from areas at risk of flooding.

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

- The proportion of previously-developed land is not known as some of the land may have been restored and is not therefore strictly previously-developed land. Some land has been reclaimed and is now under recreational use
- There are features of historic interest within the site that potentially require investment and conservation
- There may be a loss of productive arable land

2.2.51 Table 11 sets out the assessment of Marston in relation to a series of key sustainability indicators.

Table 11: Sustainability of Marston Vale as an eco-town location

SA Issue	Site Specific Issues	Indicators	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, but in the vicinity of the site: Marston Thrift (200m), Kings Wood and Glebe Meadows (2.25km (1.5 miles)), Maulden Wood and Pennyfather's Hills (4.6km (3 miles)) and Cooper's Hill (2.4km (1.5 miles))
		Presence of priority habitats/species	Yes – the area is rich in wildlife both in terms of protected and biodiversity action plan species including rare butterflies, diverse grassland communities, ancient woodland and habitats associated with brick pits[2]
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, but limited
		Area of flood risk 3 adjacent to the site	Yes, but limited
Climate change mitigation	Maximise use of renewable energy	Potential of the site for renewable energy	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
		Listed buildings/ ancient monuments within or adjacent to the site	Yes – 9 listed buildings within the site and 11 within 1km (0.6 miles) of the site boundary 4 listed monuments within the site

[2] East of England Regional Assembly (2008) Consultation response to Eco-towns: living a green future

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Table 11: Sustainability of Marston Vale as an eco-town location *(continued)*

SA Issue	Site Specific Issues	Indicators	Comment
Water resources and water quality	Minimise impacts on water resources and water quality	Water supply status	The Upper Ouse and Bedford Ouse catchment are classed as having no water available with some areas falling into the categories of being over-licensed or over-abstracted[3]
		STW capacity	Not known
Community infrastructure/ wellbeing	Utilise existing infrastructure within its capacity Complement broader planning policies/ objectives	Will contribute to retaining character of higher order centre	No
		Will facilitate regeneration	Yes – site and surroundings
		Within or adjacent to Air Quality management Area (AQMA)	SO_2 AQMA encompassing in whole, or part the parishes of Elstow, Stewartby, Wilstead and Wooton and also Lower Shelton, Marston Moretaine, Houghton Conquest, Chapel End and How End – SO_2 due to the Stewartby Brickworks which closed in February 2008 3 localised NO_2 AQMAs within Bedford
Decent and affordable homes	Meet housing need	Demand for housing	Yes – Housing Affordability Pressure is High
		Demand for affordable housing	Yes – Current households on waiting list – 2,598 in Bedford and 2,937 in mid Beds[4]

[3] Environment Agency (2005) Upper Ouse and Bedford Ouse Catchment Area Management Strategy

[4] Communities and Local Government (2008) Eco-towns: Living a greener future

Table 11: Sustainability of Marston Vale as an eco-town location *(continued)*

SA Issue	Site Specific Issues	Indicators	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)	Bedford c.5km (3 miles)
		Proximity to railway station (distance)	Within the site there are 4 stations on the Marston Vale line – Kempston Hardwick, Stewartby, Millbrook and Lidlington
		Proximity to existing sources of employment (scale/ distance)	Bedford c.5km (3 miles) and Milton Keynes c.9.5km (6 miles)
		Proximity to motorway/strategic road network (distance)	M1 J14 c.1km (0.6 miles) from the southern boundary of the site
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	The landscape character is highly disturbed as a consequence of mass clay extraction, brick-making, landfill and mineral extraction. It is unclear at the current time what proportion of the proposed site constitutes previously-developed land
		Area of grade 1/2 agricultural land within the site	No
		Area of contaminated land	A proportion of the site is likely to be contaminated due to previous landfilling and mineral extraction -area currently unknown
		Part or all of site within Green Belt	No

Table 11: Sustainability of Marston Vale as an eco-town location *(continued)*

SA Issue	Site Specific Issues	Indicators	Comment
Spatial issues *(continued)*	Use brownfield land wherever possible Reduce the loss of and damage to the most versatile agricultural land Reduce the quantity of contaminated land *(continued)*	Within growth area	The Milton Keynes and South Midlands Sub-Regional Strategy[5] identifies Beford/Kempston/ Northern Marston Vale as a location for growth

Key:			
Positive	Not known	Potential Negative	Negative

2.2.52 With reference to the sustainability indicators in Table 11, Marston was assessed as:

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

2.2.53 In relation to the HRA and impacts on European wildlife sites, it has not proven possible to say that the development that may be delivered at Marston Vale would not lead to adverse effects on The Ouse Washes SAC/ SPA and Ramsar site and The Wash and North Norfolk Coast SAC/SPA and Ramsar site as a result of increased abstraction or deteriorating water quality. Additional measures are therefore required within the PPS to give greater certainty that adverse effects will not result (see the SA and HRA of the Draft PPS).

North East Elsenham

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

- Limited ecological constraints and the potential to create ecological gain
- Proximity to a railway station and the potential for rail to be used to access off-site employment and services
- Potential to attract business investment given close proximity to the M11 and Stansted

[5] Government Office s for the South East, East Midland, East of England (2005) Milton Keynes and South Midland Sub-Regional Strategy http://www.go-se.gov.uk/gose/news/newsarchive/mksmSRS/ [accessed 29.08.08]

- Improved access to services, facilities and public transport for residents of local villages.

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

- Located within a water-stressed area
- A greenfield location comprising versatile agricultural land
- Close to the major road network but with capacity constraints on local roads leading to the potential for congestion and pressure to upgrade and widen rural lanes
- Unsuitability of local roads for walking or cycling
- The potential to change the setting and character of historic villages.

2.2.56 Table 12 sets out the assessment of North East Elsenham in relation to a series of key sustainability indicators.

Table 12: Sustainability of North East Elsenham as an eco-town location

SA Issue	Site Specific Issues	Indicators	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
		Presence of priority habitats/species	Yes
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	No
		Area of flood risk 3 adjacent to the site	Yes
Climate change mitigation	Maximise use of renewable energy	Potential of the site for renewable energy	Yes, but average
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
		Listed buildings/ ancient monuments within or adjacent to the site	Yes – adjacent
Water resources and water quality	Minimise impacts on water resources and water quality	Water supply status	Water stressed
		STW capacity	Some capacity, not a major constraint

Table 12: Sustainability of North East Elsenham as an eco-town location *(continued)*

SA Issue	Site Specific Issues	Indicators	Comment
Community infrastructure/ wellbeing	Utilise existing infrastructure within its capacity Complement broader planning policies/ objectives	Will contribute to retaining character of higher order centre	Yes
		Will facilitate regeneration	No – possibly hinder regeneration of Harlow
		Within or adjacent to Air Quality management Area (AQMA)	No
Decent and affordable homes	Meet housing need	Demand for housing	Yes – high
		Demand for affordable housing	Yes, but not high
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)	Bishops Stortford c.6.5km (4 miles) Harlow c.14.5km (9 miles)
		Proximity to railway station (distance)	Elsenham rail station c.500m
		Proximity to existing sources of employment (scale/ distance)	Stansted c.3km (2 miles)
		Proximity to motorway/strategic road network (distance)	M11 c.8km (5 miles)
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	No
		Area of grade 1/2 agricultural land within the site	Predominantly Grade 2
		Area of contaminated land	No
		Part or all of site within Green Belt	No
		Within growth area	Yes

Key:			
Positive	Not known	Potential Negative	Negative

2.2.57 With reference to the sustainability indicators in Table 12, North East Elsenham was assessed as:

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

2.2.58 In relation to the HRA and impacts on European wildlife sites, it is not possible at this stage to say with confidence that the development that may be delivered at North East Elsenham would not lead to adverse effects on European sites (particularly the Colne Estuary) as a result of increased abstraction, when considered in combination with other relevant plans and projects. Additional measures are therefore required within the PPS to give greater certainty that adverse effects will not result (see the SA and HRA of the Draft PPS).

Rushcliffe (Nottinghamshire)

2.2.59 The SA and HRA for Rushcliffe (Nottinghamshire) focused on three alternative sites: RAF Newton/Bingham; Kingston; and Cotgrave Place.

RAF Newton/Bingham

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

- Existing railway station at Bingham
- Proximity to the Sustrans cycle route which could provide a cycle route to Nottingham
- Existing planning permission for a business park which could create up to 9,000 jobs
- Part of the site is brownfield
- Part of the site (former RAF base) could be contaminated and the development would provide an opportunity to remediate it.

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

- Part of the site is greenfield and located on the edge of the Green Belt
- Parts of the site are Grade 2 and 3 agricultural land
- The road infrastructure around the site is under great pressure
- There is an area at high risk of flooding within the site, to the east of the A46 and north of the existing settlement at Bingham. The flood risk area covers approximately 15 per cent of the total area of search
- Potential for significant landscape impacts due to the rural and flat nature of the area.

Kingston

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

- Natural features that would contain the development in the landscape
- Proximity to major employment locations (airport, power station, etc)
- Planned improvements to local roads (A453, M1) that are likely to go ahead
- Proximity to a future Midlands Mainland Station (East Midlands Parkway Station).

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

- The site is greenfield and is located within the Nottingham and Derby Green Belt
- Parts of the site are Grade 2 and 3 agricultural land
- Although road improvements are going ahead, the new settlement could negate the benefits of these improvements to the area. In addition, these improvements could facilitate Kingston becoming a commuter town. Finally the improvements only go as far as the beginning of the built up area (Clifton) and could end up merely creating a bigger bottleneck nearer Nottingham
- Risk of coalescence with and/or loss of character of surrounding settlements.

Cotgrave Place

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

- Existing disused mineral line which could be reopened and used (however, the Department for Transport has warned that there are many problems inherent in reopening the disused mineral line, the main one being the viability of the service)
- Proximity to Nottingham which could encourage walking and cycling to work
- The proximity of the Grantham Canal and possibility of using this as a walking/cycling route and recreational resource
- Good range of links to accessible countryside for recreation, eg the Grantham Canal, Cotgrave Country Park, and Holme Pierrepont Country Park.

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

- The site is located within the Green Belt
- There are a number of small settlements/proposed developments in the area so there could be a risk of coalescence (the proposal includes relocating the existing golf course between the site and Cotgrave to avoid this)
- The road infrastructure in Rushcliffe and around the site is under great pressure
- It could become a commuter settlement because of its proximity to the strategic road network
- The site is greenfield and part of it is Grade 3 agricultural land.

2.2.66 Table 13 sets out the assessment of the alternatives for Rushcliffe (Nottinghamshire) in relation to a series of key sustainability indicators.

Table 13: Sustainability of RAF Newton/Bingham, Kingston and Cotgrave Place as eco-town locations

SA Issue	Site Specific Issues	Indicators	RAF Newton/ Bingham Comment	Kingston Comment	Cotgrave 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	Yes – SSSI adjacent to site (Rushcliffe Golf course)	No
		Presence of priority habitats/species	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	Possible – approximately 15% of the search area is flood risk zone 3	No	Yes – the EA have highlighted that flood risk is a highly significant issue for the site
		Area of flood risk 3 adjacent to the site	No	Yes – some localised flood risk	Yes – some localised flood risk

Table 13: Sustainability of RAF Newton/Bingham, Kingston and Cotgrave Place as eco-town locations *(continued)*

SA Issue	Site Specific Issues	Indicators	RAF Newton/ Bingham Comment	Kingston Comment	Cotgrave Comment
Climate change mitigation	Maximise use of renewable energy	Potential of the site for renewable energy	Not known	Not known	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
		Listed buildings/ ancient monuments within or adjacent to the site	Yes – listed buildings and SAMs	Yes – listed buildings	Yes – listed buildings
Water resources and water quality	Minimise impacts on water resources and water quality	Water supply status	Site located in the East Midlands Water Resource Zone – currently in deficit	Site located in the East Midlands Water Resource Zone – currently in deficit	Site located in the East Midlands Water Resource Zone – currently in deficit
		STW capacity	Additional STW capacity may be required	Additional STW capacity may be required	Additional STW capacity may be required
Community infrastructure / wellbeing	Utilise existing infrastructure within its capacity Complement broader planning policies/objectives	Will contribute to retaining character of higher order centre	Not known	Not known	Not known
		Will facilitate regeneration	Not known	Not known	Not known
		Within or adjacent to Air Quality management Area (AQMA)	NO_2 AQMAs encompassing parts of the A52 southern ring road, areas in and around West Bridgford and areas in central Norttingham	NO_2 AQMAs encompassing parts of the A52 southern ring road, areas in and around West Bridgford and areas in central Norttingham	NO_2 AQMAs encompassing parts of the A52 southern ring road, areas in and around West Bridgford and areas in central Norttingham

Table 13: Sustainability of RAF Newton/Bingham, Kingston and Cotgrave Place as eco-town locations *(continued)*

SA Issue	Site Specific Issues	Indicators	RAF Newton/ Bingham Comment	Kingston Comment	Cotgrave Comment
Decent and affordable homes	Meet housing need	Demand for housing	Yes	Yes	Yes
		Demand for affordable housing	Yes – lack of affordable housing a key issue in the borough	Yes – lack of affordable housing a key issue in the borough	Yes – lack of affordable housing a key issue in the borough
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)	Nottingham c.14km (9 miles)	Nottingham c.17km (10.5 miles)	Nottingham c.8km (5 miles)
		Proximity to railway station (distance)	The existing settlement of Bingham has a rail station	East Midlands Parkway station c.5.5km (3.5 miles)	Radcliffe on Trent c.5km (3 miles) Potential for reopening disused minerals rail line
		Proximity to existing sources of employment (scale/distance)	On site (existing planning permission for a business park)	Close to several employment areas including airport, gypsum works, power station and university c.3km (2 miles)	Nottingham c.8km (5 miles)
		Proximity to motorway/ strategic road network (distance)	Adjacent to A46 and A52	A453 c.2.5km (1.5 miles) M1 c.5km (3 miles)	Adjacent to A52

Table 13: Sustainability of RAF Newton/Bingham, Kingston and Cotgrave Place as eco-town locations *(continued)*

SA Issue	Site Specific Issues	Indicators	RAF Newton/ Bingham Comment	Kingston Comment	Cotgrave 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 – part of the site is brownfield	No – greenfield	No – greenfield
		Area of grade 1/2 agricultural land within the site	Grade 2 and 3	Grade 3	Grade 2 and 3
		Area of contaminated land	Contamination possible in the former RAF site	Not known	Not known
		Part or all of site within Green Belt	Yes – partly located in the Nottingham and Derby green belt	Yes – partly located in the Nottingham and Derby green belt	Yes – located within the Nottingham and Derby green belt
		Within growth area	Yes – within Growth Point	Yes – within Growth Point	Yes – within Growth Point

Key:			
Positive	Not known	Potential Negative	Negative

2.2.67 With reference to the sustainability indicators in Table 14, the alternatives for Rushcliffe (Nottinghamshire) were assessed as:

RAF Newton/Bingham

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

Kingston

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

Cotgrave Place

C. Location only likely to be suitable for an eco-town with substantial and exceptional innovation

2.2.68 In relation to the HRA and impacts on European wildlife sites, it is not possible to state that the development in Rushcliffe (whether at RAF Newton, Kingston or Cotgrave Place) would not lead to adverse effects on the Humber Estuary SAC/SPA and Ramsar site as a result of deteriorating water quality, or on European sites as a result of increased abstraction. Additional measures are therefore required within the PPS to give greater certainty that adverse effects will not result (see the SA and HRA of the Draft PPS).

Greater Norwich

2.2.69 The SA and HRA for Greater Norwich focused on two alternative sites: RAF Coltishall and Rackheath

RAF Coltishall

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

- The limited landscape, ecological and historic interest of the site and the potential to create ecological gain
- It is a brownfield site.

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

- Current isolation of the site in relation to current public transport links and the requirement for major transport infrastructure upgrades
- Available water resources.

Rackheath

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

- Close to existing operational railway with station access
- Proximity to Norwich and the location within the Norwich Priority Growth Area
- The location is being considered in the Core Strategy by the Greater Norwich Development Partnership.

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

- The location is split into two sites extending either side of the Northern Distributor Road (NDR)
- The great majority of the site has not been previously developed.

2.2.74 Table 14 sets out the assessment of alternatives for Greater Norwich in relation to a series of key sustainability indicators.

Table 14: Assessment of alternatives for Greater Norwich against key sustainability criteria

SA Issue	Site Specific Issues	Indicators	RAF Coltishall	Rackheath
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
		Presence of priority habitats/ species	Not known	Yes – Lowland Mixed Deciduous Woodland and Upland Oakwoods
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	No	No
		Area of flood risk 3 adjacent to the site	Yes – nearby River Bure west and south west of Lamas	No
Climate change mitigation	Maximise use of renewable energy	Potential of the site for renewable energy	Not known	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, but may impinge on historic parkland, ancient woodland and county wildlife sites
		Listed buildings/ ancient monuments within or adjacent to the site	No	Yes – on-site
Water resources and water quality	Minimise impacts on water resources and water quality	Water supply status	No additional water available	Resources available
		STW capacity	New STW required	Up to 6,000 houses without increased capacity

Table 14: Assessment of alternatives for Greater Norwich against key sustainability criteria *(continued)*

SA Issue	Site Specific Issues	Indicators	RAF Coltishall	Rackheath
Community infrastructure/ wellbeing	Utilise existing infrastructure within its capacity Complement broader planning policies/objectives	Will contribute to retaining character of higher order centre	No	Yes
		Will facilitate regeneration	May detract from regeneration in North Walsham	Yes
		Within or adjacent to Air Quality management Area (AQMA)	Yes – 3 NO_2 AQMAs at St Augustines, Grapes Hill and Castle in Norwich	Yes – 3 NO_2 AQMAs at St Augustines, Grapes Hill and Castle in Norwich
Decent and affordable homes	Meet housing need	Demand for housing	Yes – Annual target of 90 completions for NNDC Target of 37,500 completions for Norwich, BDC and SNDC b/n 2001-2021	Target of 37,500 completions for Norwich, BDC and SNDC b/n 2001-2021
		Demand for affordable housing	Yes – lack of affordable housing identified in NNDC & BDC	Yes – lack of affordable housing identified BDC
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)	Norwich c.20km (12.5 miles)	Norwich c.9km (5.5 miles)
		Proximity to railway station (distance)	Worstead c.5km (3 miles)	Salhouse c.2.5km (1.5 miles)
		Proximity to existing sources of employment (scale/distance)	North Walsham c.9km (5.5 miles) and Norwich c.20km (12.5 miles)	Some employment areas on-site, Norwich c.9km (5.5 miles)
		Proximity to motorway/ strategic road network (distance)	A140 c.6.5km (4 miles), B1150 c.1km (0.6 miles)	A.1151 c.500m

Table 14: Assessment of alternatives for Greater Norwich against key sustainability criteria *(continued)*

SA Issue	Site Specific Issues	Indicators	RAF Coltishall	Rackheath
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 – All of site previously developed land	Yes – most of the northern site is previously developed land
		Area of grade 1/2 agricultural land within the site	No – Grade 4	No – Grade 3
		Area of contaminated land	Not known	Not known
		Part or all of site within Green Belt	No	No
		Within growth area	No	Yes

Key:			
Positive	Not known	Potential Negative	Negative

2.2.75 With reference to the sustainability indicators in Table 14, the alternatives for Greater Norwich were assessed as:

RAF Coltishall

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

Rackheath

A Generally suitable for an eco-town

RAF Coltishall

2.2.76 In relation to the HRA and impacts on European wildlife sites, it has not proven possible to say that the development that may be delivered at Coltishall would not lead to adverse effects on Norfolk Valley Fens SAC, Broadlands SPA & Ramsar site or the River Wensum SAC as a result of recreational pressure. It was also not possible to rule out adverse effects upon European sites as a result of increased abstraction or on the Broadlands SPA as a result of deteriorating water quality. Additional measures are therefore required within the PPS to give greater certainty that adverse effects will not result (see the SA and HRA of the Draft PPS).

Rackheath

2.2.77 In relation to the HRA and impacts on European wildlife sites, it has not proven possible to say that the development that may be delivered at Rackheath would not lead to adverse effects on Norfolk Valley Fens SAC, Broadlands SPA & Ramsar site or the River Wensum SAC as a result of recreational pressure. It was also not possible to rule out adverse effects upon European sites as a result of increased abstraction or on the Broadlands SPA as a result of deteriorating water quality. Additional measures are therefore required within the PPS to give greater certainty that adverse effects will not result (see the SA and HRA of the Draft PPS).

Curborough

2.2.78 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.

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

- Area of moderate water stress
- 77 per cent green field
- Ancient woodland and priority habitats/species.

2.2.80 Table 15 sets out the assessment of Curborough in relation to a series of key sustainability indicators.

Table 15: Sustainability of Curborough as an eco-town location

SA Issue	Site Specific Issues	Indicators	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
		Presence of priority habitats/species	Yes – identified in the Staffordshire BAP and designated areas of Ancient Woodland within and adjacent to the site boundary
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 – but the majority of site is FZ1
		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 Protect and enhance heritage assets and their settings	Designated landscapes across or adjacent to the site	No
		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 15: 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 Complement broader planning policies/ objectives	Will contribute to retaining character of higher order centre	May assist conservation of Lichfield
		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 Provide easy access to a railway station Discourage long distance commuting Proximity to area of poor air quality	Proximity to higher order centre (distance)	Burton on Trent and Stafford c.20km (12.5 miles)
		Proximity to railway station (distance)	Trent Valley station c.4km (2.5 miles)
		Proximity to existing sources of employment (scale/ distance)	Adjacent to Fradley Park Employment Area
		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 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 – small part of the proposed development will be built on previously developed land
		Area of grade 1/2 agricultural land within the site	No
		Area of contaminated land	Some sporadic contamination is likely
		Part or all of site within Green Belt	No
		Within growth area	No

Key:			
Positive	Not known	Potential Negative	Negative

2.2.81 With reference to the sustainability indicators in Table 15, Curborough was assessed as:

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

2.2.82 In relation to the HRA and impacts on European wildlife sites, it is not possible at this stage to say with confidence that the development that may be delivered at Curborough would 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). Additional measures are therefore required within the PPS to give greater certainty that adverse effects will not result (see the SA and HRA of the Draft PPS).

Manby

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

- Its central location in East Lindsey between Louth and the coastal towns
- The potential to address the problems confronting existing settlements in areas of high flood-risk, in line with the recommendations of PPS25
- Its brownfield status
- The potential to capitalise on and enhance the existing on-site business park to provide employment
- The potential to provide a location for and concentrate new development in a manner which addresses the need for housing, employment, in-migration, a balanced community structure, and higher skills
- The opportunity to address social and economic deprivation in Mablethorpe and other coastal communities.

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

- It is located within a water-stressed area and may draw on the aquifers of the Lincolnshire Wolds
- There are relatively poor public transport links to other towns and connecting the district to other areas
- Potential for surface water run off to contribute to localised flooding
- The cost and complexity of achieving a phased transfer of existing coastal communities with high levels of deprivation to an inland new town location could undermine the benefits of the proposal.

2.2.85 Table 16 sets out the assessment of Manby in relation to a series of key sustainability indicators.

Table 16: Sustainability of Manby as an eco-town location

SA Issue	Site Specific Issues	Indicators	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
		Presence of priority habitats/species	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	No
		Area of flood risk 3 adjacent to the site	Yes, but small area
Climate change mitigation	Maximise use of renewable energy	Potential of the site for renewable energy	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	Yes, but Lincolnshire Wolds AONB to west
		Listed buildings/ ancient monuments within or adjacent to the site	Yes – on site
Water resources and water quality	Minimise impacts on water resources and water quality	Water supply status	Aquifer fully committed
		STW capacity	New STW required
Community infrastructure/ wellbeing	Utilise existing infrastructure within its capacity Complement broader planning policies/ objectives	Will contribute to retaining character of higher order centre	Yes – Louth
		Will facilitate regeneration	Yes
		Within or adjacent to Air Quality management Area (AQMA)	No

Table 16: Sustainability of Manby as an eco-town location *(continued)*

SA Issue	Site Specific Issues	Indicators	Comment
Decent and affordable homes	Meet housing need	Demand for housing	No – annual target of 650 completions for District
		Demand for affordable housing	Yes – lack of affordable housing identified as problem in LDF 5000 households on Housing Register
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)	Louth c.11km (7 miles)
		Proximity to railway station (distance)	Skegness c.43km (27 miles)
		Proximity to existing sources of employment (scale/ distance)	On site
		Proximity to motorway/strategic road network (distance)	A.16 c.6.5km (4 miles)
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 – majority of site
		Area of grade 1/2 agricultural land within the site	No – Grade 3
		Area of contaminated land	Not known
		Part or all of site within Green Belt	No
		Within growth area	No

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

2.2.86 With reference to the sustainability indicators in Table 16, Manby was assessed as:

A. Generally suitable for an eco-town

2.2.87 In relation to the HRA and impacts on European wildlife sites, it is not possible at this stage to say with confidence that development at Manby would not lead to adverse effects on the Humber Estuary SPA and Ramsar site, the Humber Estuary SAC, or the Saltfleetby-Theddlethorpe Dunes & Gibraltar Point SAC as a result of recreational pressure, increased demand for water resources or increased discharge of treated wastewater. Additional measures are therefore required within the PPS to give greater certainty that adverse effects will not result (see the SA and HRA of the Draft PPS).

Leeds City Region

2.2.88 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

2.2.89 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

2.2.90 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 Zone 3
- good proximity to train station

2.2.91 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

2.2.92 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

2.2.93 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

2.2.94 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

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

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

2.2.96 Table 17 sets out the assessment of the alternatives for Leeds City Region in relation to a series of key sustainability indicators.

Table 17: Sustainability of the Leeds City Region proposals as eco-town locations

SA Issue	Site Specific Issues	Indicators	Burn Airfield	Church Fenton	Gascoigne Wood	Willow Green
Biodiversity and green infrastructure	Conserve and enhance biodiversity	SSSIs within or adjacent to the site	No	No	No	No
	Protect and enhance priority habitats and species Increase and enhance green infrastructure	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	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
	Avoid exacerbating flooding in the vicinity of the site	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 17: Sustainability of the Leeds City Region proposals as eco-town locations *(continued)*

SA Issue	Site Specific Issues	Indicators	Burn Airfield	Church Fenton	Gascoigne Wood	Willow Green
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 Complement broader planning policies/ objectives	Will contribute to retaining character of higher order centre	Not known	Not known	Not known	Not known
		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 17: Sustainability of the Leeds City Region proposals as eco-town locations *(continued)*

SA Issue	Site Specific Issues	Indicators	Burn Airfield	Church Fenton	Gascoigne Wood	Willow Green
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 17: Sustainability of the Leeds City Region proposals as eco-town locations *(continued)*

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

2.2.97 With reference to the sustainability indicators in Table 17, the alternatives for Leeds City Region were assessed as:

Burn Airfield

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

Church Fenton

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

Gascoigne Wood

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

Willow Green

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

2.2.98 It is not possible to conclude that the development that may be delivered at Leeds will not lead to adverse effects on some or all of Skipwith Common SAC (potentially from all alternatives), Lower Derwent Valley SAC (potentially from Church Fenton, Gascoigne Wood or Burn Airfield), Kirk Deighton SAC (potentially from Church Fenton), Thorne Moor SAC (potentially from Burn Airfield and Willow Green), Thorne & Hatfield Moors SPA (potentially from Burn Airfield and Willow Green) or the Humber Estuary SAC, SPA and Ramsar site (potentially from Gascoigne Wood, Church Fenton and Willow Green) as a result of increased recreational pressure.

2.2.99 It has also not been possible to conclude that the alternative will not have an adverse effect on European sites as a result of increased abstraction, or on the Humber Estuary SPA/SAC as a result of declining water quality. Additional measures are therefore required within the PPS to give greater certainty that adverse effects will not result (see the SA and HRA of the Draft PPS).

2.3 Summary of grading

2.3.1 Table 18 summarises the grading for each of the potential eco-town locations considered.

Table 18: Summary of grading

Shortlisted location	Banding
Pennbury	B
Middle Quinton	B
Bordon-Whitehill	B
Weston Otmoor	C
– Shipton	B
– North West Bicester	B
Ford	B
St Austell (China Clay Community)	B
Rossington	B
Hanley Grange	B
– Alconbury	B
– Waterbeach	B
Marston Vale	B
North East Elsenham	B
Rushcliffe – Former RAF Newton/ Bingham	B
Rushcliffe– Kingston	B
Rushcliffe– Cotgrave Place	C

Table 18: Summary of grading *(continued)*

Shortlisted location	Banding
Greater Norwich– RAF Coltishall	C
Greater Norwich – Rackheath	A
Curborough	B
Manby	A
Leeds Region– Burn Airfield	C
Leeds Region– Church Fenton	B
Leeds Region– Gascoigne Wood	B
Leeds Region – Willow Green	B

3 Cumulative effects

3.1 Introduction

3.1.1 This section sets out the **cumulative effects** that development at the shortlisted eco-town locations might give rise to from a regional perspective. The SA of the Draft Eco-towns PPS considers the cumulative impacts which the Eco-towns Programme might give rise to from a national perspective. It should be noted that the discussion of potential cumulative effects is to some degree hypothetical since at this stage it is unclear which of the locations will ultimately be taken forward. Note also that the analysis focuses on the shortlisted locations; the reasonable alternatives are not included in the discussion.

3.2 Cumulative effects

Yorkshire and the Humber

3.2.1 Yorkshire and Humber is the fifth largest of the nine English regions in terms of land area and the seventh largest by population with approximately five million people distributed across a largely rural landscape. In population terms, the Region is dominated by the 'Leeds City Region' which is home to 48 per cent of its population[6]. The Region's economy has recently grown due to expansion of knowledge business and financial services industries, particularly around the Leeds City Region. Elsewhere, parts of the regional economy continue to require restructuring and pressing socio-economic issues need to be addressed. The Region has some of the UK's highest levels of crime and fear of crime and low levels of education attainment and skills shortages are evident. Deprivation is particularly acute in urban areas while in rural and coastal zones, isolation also contributes to significant issues. Climate change, particularly rising sea levels could have severe effects on Yorkshire and the Humber as it has the second highest number of properties at risk of flooding, the second highest number of people living in the floodplain (after Greater London) and it has the most properties and people within the floodplain at significant and moderate risk of flooding within England and Wales. The Region has also suffered from increasingly more days (over 40) of moderate or higher air pollution, much of it being transport-related[7].

[6] Government Office for Yorkshire and the Humber (2008). *The Yorkshire and Humber Plan: Regional Spatial Strategy to 2026* [online] www.goyh.gov.uk/497763/docs/199734/199799/689582/1_Y_H_Published_RSS_May_2008.pdf (accessed 14 October 2008).

[7] Yorkshire Futures (2008). *Progress in the Region 2007* [online] www.yorkshirefutures.com/siteassets/documents/YorkshireFutures/8/2/82B021CE-4511-46F1-861C-DE0B850FA9FE/PIR%20Main%20Document%202007.pdf?bcsi_scan_F6892CABA15785B4=0&bcsi_scan_filename=PIR%20Main%20Document%202007.pdf (accessed 14 October 2008).

3.2.2 The Region is experiencing net inward migration and overall economic growth. The population for Yorkshire and the Humber is projected to rise by 7.4 per cent to 5.4 million by the year 2028[8]. The current RSS – the Yorkshire and Humber Plan – highlights that housing provision needs to take into account both economic growth and regeneration priorities as found in the Leeds City Region, South Yorkshire and the Humber Estuary but also local needs in rural areas. Of particular concern has been the trend in recent years for house prices to rise faster than incomes. This issue is further complicated by spatial mismatches between areas of low demand for housing and others that are unaffordable for most people. Household size is reducing with over half of households now two people or less; whilst rural communities are increasingly becoming home to a disproportionate number of older and more affluent people[9]. Housing on previously developed land has increased since 2005, though each year has witnessed large shortages in the provision of affordable housing[10]. Traffic flows continue to increase, with little to no reduction in travel and modal shift[11].

3.2.3 The Yorkshire and Humber Plan provides for the delivery of at least 22,260 net additional dwellings per annum between 2008 and 2026. Most of the Yorkshire and Humber regional housing growth is expected to occur in the Leeds City Region due to its strong economic performance. The Government has shortlisted two eco-town locations in Yorkshire and the Humber: Rossington and the Leeds City Region. The RSS states that the Leeds City Region will need to accommodate around 60 per cent of the region's job and household growth over the next 15-20 years; however, Rossington (within Doncaster Metropolitan Borough Council area) lies outside the strategic settlement network, as identified in the RSS but Doncaster is within one of the Government's new 'Growth Points'.

3.2.4 Assuming that the two eco-town proposals are developed, they will provide additional housing and the opportunity to provide more affordable housing for the region while their environmental impacts should be less than those of conventional housing developments. Their potential to be situated on previously developed land could mitigate any adverse effects the developments might have on biodiversity and could potentially enhance regional environmental quality. The specific impacts of each of the proposed eco-towns are discussed in the relevant chapter. There is the potential for the proposed eco-towns to have a negative overall impact on local and regional transport networks but this would not be over-and-above any impacts generated by conventional housing schemes and should be less if

[8] Office for National Statistics (2004). Yorkshire and the Humber population projected to continue to rise [online] www.yorkshirefutures.com/siteassets/documents/YorkshireFutures/9/8/9806D903-6330-442A-9C46-377E4F71C346/y%20and%20h%20pop%20forecast.pdf (accessed 14 October 2008).

[9] Yorkshire and Humber Regional Assembly (2008). *Annual Monitoring Report 2007* [online] www.yhassembly.gov.uk/dnlds/AMR per cent2007.pdf (accessed 15 October 2008).

[10] Ibid

[11] Ibid

the transport standards are met. The issue of water scarcity is an important consideration in development proposals in Yorkshire and the Humber so the potential for 'water neutrality' would also represent an important step change for development in this region.

West Midlands

3.2.5 The West Midlands is centrally located within England, covers approximately 13,000 square kilometres and has a population of approximately 5.3 million people. At the centre of the region is the 'West Midlands Conurbation', comprising Birmingham, Solihull, and the Black Country local authorities of Dudley, Sandwell, Walsall and Wolverhampton. While half a century ago the Region was one of the most prosperous in the county, it now underperforms against the UK average. Sub-regional economic variations are visible with some areas such as Birmingham, Solihull and Coventry outperforming the UK average GVA per capita while others such as Herefordshire and Shropshire are significantly below average[12]. Interesting patterns of socio-economic challenges have emerged across the Region. For example, the Birmingham and Solihull sub-region has high levels of GVA per head but the employment rate of the resident population is quite low and there are significant communities experiencing deprivation and worklessness. In contrast, the rural west of the region is characterised by generally low levels of GVA per head, but has above average skills and enterprise levels[13].

3.2.6 The population profile of the West Midlands is changing. There has been out-migration from urban areas, an ageing rural population and international migration into the area. The quality of the living environment is generally good in the West Midlands; however, pockets of very poor environmental quality are present in some local authority areas, most obviously in urban locations. The SA of the Draft RSS Phase 3 for the West Midlands – final scoping report, found that *"In parts of the region, environmental quality, landscapes and the historic environment are coming under increasing pressure from development, leading to change inconsistent with its character. With future increases in the levels of housing development sought, this trend is likely to increase unless there is a step change in the quality of new development and mitigation of its impacts"*[14].

[12] The West Midlands Region (no date). *Connecting to success: West Midlands economic strategy* [online] www.advantagewm.co.uk/Images/WMES_tcm9-9538.pdf (accessed 14 October 2008).

[13] The West Midlands Region (no date). *Connecting to success: West Midlands economic strategy* [online] www.advantagewm.co.uk/Images/WMES_tcm9-9538.pdf (accessed 14 October 2008).

[14] WMRA (2008). *SA of the Draft RSS Phase 3 for the West Midlands – final scoping report* [online] www.wmra.gov.uk/documents/Phase%203%20Scoping%20Report%20-%20TP3%20-%20Nat%20Res%20Prot%20and%20Env%20Enh%20-%209.9.08%20Final.pdf?bcsi_scan_F6892CABA15785B4=0&bcsi_scan_filename=Phase%203%20Scoping%20Report%20-%20TP3%20-%20Nat%20Res%20Prot%20and%20Env%20Enh%20-%209.9.08%20Final.pdf (accessed 14 Oct. 08).

3.2.7 The mean house price in the West Midlands increased each year between 1992 and 2007 and by 108.3 per cent since 2000[15]. Housing affordability is an important issue in the Region; however, as house prices fall as a result of the economic downturn, housing should become more affordable to those looking to access the housing market[16].

3.2.8 Phase two of the West Midlands Regional Spatial Strategy (WMRSS) Revision deals with selected issues relating to the provision of housing and employment land, town and city centres, transport and waste. It was submitted to the Secretary of State in December 2007 and is currently under consultation until December 2008. Currently under consideration are spatial options for delivering housing in the Region. The draft West Midlands Phase 2 RSS revision set a Preferred Option for delivering 365,600 net additional homes by 2026. The National Housing and Planning Advice Unit has indicated the potential need for between circa 377,000 and 447,000 new dwellings in the RSS period.

3.2.9 The Government has short-listed two eco-towns in the West Midlands: Middle Quinton (near Stratford-upon-Avon, Warwickshire) and Curbrough (Staffordshire). The proposed developments will result in the loss of some greenfield and agricultural land but this is balanced by the potential for the developments to contribute towards overall enhancement of the regional biodiversity. The positioning of the proposed eco-towns outside the Major Urban Areas could result in long-distance travel by private car, placing further pressure on road networks and increasing greenhouse emissions. Nevertheless, the eco-towns could help to provide the step change in the quality of new development referred to in the SA of the Draft RSS. This shift could lead to particularly positive changes in domestic water consumption; water supply capacity issues that have been identified within the Region by the Environment Agency.

East Midlands

3.2.10 The East Midlands population of 4.36 million is the second lowest of the English regions. The region has a polycentric settlement structure, based on its three major cities of Nottingham, Derby and Leicester and the regional centres of Lincoln and Northampton. Just under 40 per cent of the population live in towns and villages of less than 10,000, which makes the Region one of the more rural regions in England[17]. These cities and towns exist as relatively self-contained communities. While predominantly a vibrant and healthy region, pockets of serious socio-economic concern,

[15] WMRA (2008). *AMR 2007: regional housing market summary* [online] www.wmra.gov.uk/documents/Housing%20Summary 202007.pdf?bcsi_scan_F6892CABA15785B4=0&bcsi_scan_filename=Housing%20Summary per cent202007.pdf (accessed 15 October 2008).

[16] Ibid

[17] Government Office for the East Midlands (2005). *Regional Spatial Strategy for the East Midlands* (RSS8) [online] www.gos.gov.uk/497296/docs/191913/237644/rss8.pdf (accessed 14 October 2008).

particularly in the Northern Sub-area but also in parts of the many towns and cities as well as the more isolated and sparsely populated rural areas on the Lincolnshire Coast. In July 2007, 70 per cent of the SSSI areas in the East Midlands were classed as favourable or unfavourable recovering and over the last decade the rate of woodland creation has been between 500 and 850 ha per annum, significantly short of the rate required of 65,000 ha by 2021[18].

3.2.11 There has been a long-term decline in biodiversity within the region and there are areas with significant flood risk. At the same time, throughout much of the region, surface water is already fully utilised during the summer months, and much of the groundwater in the East Midlands is subject to an unacceptable abstraction regime. This has implications not only for development but also for wildlife and habitats. Pressure is growing on the transport infrastructure as travel demand increases. Housing provision figures are being re-examined in the current RSS review which extends the previous RSS for the East Midlands (2005) to 2026. The new average annual housing provision for the East Midlands Region for the period to 2026 is 20,418. Much of the additional growth is proposed in and around the main cities of Derby, Leicester and Nottingham and surrounding areas and in other Growth Point agreements at Lincoln, Newark and Grantham. The Regional Housing Strategy[19] has identified that in many parts of the region, such as the Peak District, parts of Northamptonshire and Lincolnshire, and parts of many urban areas, affordability is an increasing problem. While affordable housing completions increased between 2003/4 and 2006/7, the target figures for affordable housing in most Housing Market Areas (HMAs) are not currently being achieved[20]. The proportion of new dwellings and conversions on PDL increased from 67.8 per cent to 70.9 per cent between 2005/06 and 2006/07, thereby continuing to exceed the target of 60 per cent[21].

3.2.12 The Government has short-listed three eco-towns in the East Midlands: Rushcliffe (Nottinghamshire), Pennbury (Leicestershire) and Manby (Lincolnshire). These developments could play a key role in reducing concerns over housing affordability within the region. This can subsequently encourage economic growth and social inclusion, particularly as a lack of affordable housing has been cited as a key issue in each location. While the impacts of the developments on transport infrastructure are a vital consideration for eco-towns, the cumulative effects of the short-listed eco-towns in the East Midlands are unclear although they should not be above-and-beyond the transport impacts of conventional housing schemes and

[18] East Midlands Regional Assembly (2008). *Annual Monitoring Report 2006/07* [online] www.emra.gov.uk/files/rss-amr_200607-final-full-report-feb08.pdf (accessed 15 October 2008).

[19] Government Office for the East Midlands (2004). *Regional Housing Strategy 2004-2010* [online] www.goem.gov.uk/497296/docs/191913/232488/288818/strategy (accessed 14 October 2008).

[20] East Midlands Regional Assembly (2008). *Annual Monitoring Report 2006/07* [online] www.emra.gov.uk/files/rss-amr_200607-final-full-report-feb08.pdf (accessed 15 October 2008).

[21] Ibid

should be less if the transport standards are met. As parts of the region are among the driest in England and the majority of surface water through the East Midlands is already fully committed to existing abstractions (with possible exception of the River Trent and the River Soar) the prospect of 'water neutrality' again would represent a much needed step change for development within the region.

East of England

3.2.13 The East of England is one of the largest English regions and has a population of almost 5½ million. Although the region is comparatively affluent, areas of relative deprivation are evident in the north and north eastern parts of the region (eg around King's Lynn, Norwich and Peterborough), the southern parts of the region (eg around Basildon, Southend and Thurrock) and around towns such Bedford, Ipswich and Luton. The region is characterised by small and medium sized towns and cities surrounded by more rural areas which look to those towns for employment and higher level services; the main exceptions are Essex Thames Gateway and the London Arc[22]. The East of England is the driest region and the majority of the region's water resources are fully developed and in some cases over-committed[23]. In addition, climate change may well have a greater impact in the East of England than in other regions; the Thames Gateway and parts of the region's coast are particularly vulnerable in relation to sea level rise and increased flood risk.

3.2.14 The region has the fastest growing population in England, fuelled by a combination of indigenous growth and net in-migration from London; the population is forecast to exceed 6 million by 2021 with Cambridgeshire, Essex and Hertfordshire accounting for much of the growth[24]. The East of England Plan emphasises that although housing markets vary, there are affordability problems in nearly all parts of the East of England[25]. The Plan provides for the delivery of at least 26,830 net additional dwellings a year from 2006[26]; however, it argues that while this represents a significant step forward, it is only a partial step in addressing the housing shortfall and

[22] Government Office for the East of England (2008). *East of England Plan: The Revision to the Regional Spatial Strategy for the East of England* [online] www.go-east.gov.uk/goee/docs/193657/193668/Regional_Spatial_Strategy/EE_Plan1.pdf (accessed 13 October 2008).

[23] Environmental Capacity in the East of England: A Discussion Paper, paper prepared on behalf of the East of England Environmental Forum for submission to the Environment and Resources Committee of the East of England Regional Assembly [online] www.eastspace.net/eeef/documents/EEEF_Environmental_Capacity_final.doc (available at 13 October 2008).

[24] East of England Development Agency (2006). *East of England: State of the Regional Economy* [online] www.eastofenglandobservatory.org.uk/viewResource.aspx?id=14601 (accessed 13 October 2008).

[25] Government Office for the East of England (2008). *East of England Plan: The Revision to the Regional Spatial Strategy for the East of England* [online] www.go-east.gov.uk/goee/docs/193657/193668/Regional_Spacial_Strategy/EE_Plan1.pdf (accessed 13 October 2008).

[26] Altogether the region should deliver at least 508,000 net additional dwellings over the period 2001 to 2021.

deteriorating affordability. In light of this, the Plan is currently under review and the Government has indicated that the primary focus for the review should be to roll the plan forward to 2031 and further increase the house building trajectory[27]. In terms of increasing the delivery of new housing, the Regional Assembly has stated that *"The current [East of England] Plan sets out a spatial strategy which in broad terms concentrates growth on key centres and that will provide the starting point for the review. We will need, however, to examine whether that approach has the capacity to continue accepting development up to 2031 and beyond. Other spatial development options will be tested including a major new settlement/urban extension, as well as smaller urban extensions/new settlements"*[28].

3.2.15 The Government has shortlisted four eco-town locations in the East of England: Hanley Grange (where the associated development proposal has been withdrawn); Greater Norwich; Marston; and North East Elsenham. In light of the housing shortfall and the affordability problems in the region, there is little doubt that the provision of further housing will, generally speaking, assist in promoting economic growth and social inclusion, particularly since the locations are all in areas of the region experiencing high, very high or extreme housing affordability pressure[29]. However, the level of development in the East of England has raised serious environmental concerns. For example, the SA of the Draft East of England Plan – which proposed a total of 478,000 new homes in the region over the period 2001 – 2021 – concluded that, *"The baseline assessment…shows that a number of aspects of the environment are already seriously stressed by human impacts. Further development on any significant scale is likely to have serious negative impacts on water resources, biodiversity, tranquillity, air quality, recreational access and congestion"*[30]. However, the report went on to argue that, *"The scale and pace of growth envisaged is likely to be highly environmentally damaging unless planning controls are combined with other measures to ensure that new development achieves a 'step change' improvement in resource intensity, including approaching zero net climate change impacts, piped water demand, road traffic generation and loss of wildlife habitat"*[31]. Generally speaking, and assuming they go ahead, the eco-towns' anticipated environmental credentials should go some way to alleviating their environmental impacts; however, individual eco-towns will inevitably have some impact on the environment, particularly as a result of traffic generation (which could also have adverse economic and social

[27] East of England Regional Assembly (2008). *Review of the East of England Plan: Draft Project Plan* [online] www.eera.gov.uk/category.asp?cat=736 (accessed 15 August 2008).

[28] Ibid

[29] Communities and Local Government (2008). *Eco-towns: Living a greener future – consultation paper* [online] www.communities.gov.uk/publications/housing/ecotownsgreenerfuture (accessed 5 August 2008).

[30] East of England Regional Assembly (2004). *East of England Plan: Sustainability Appraisal Report* [online] www.eera.gov.uk/Documents/About%20EERA/Policy/Planning%20and%20Transport/PlanHome/RPG/RPG14/SEASustainabilityAppraisal/Sustainability_Appraisal%20Final%20version/SEA.pdf (accessed 13 October 2008).

[31] Ibid

impacts). Importantly for the East of England, the Draft Eco-towns PPS raises the prospect of 'water neutrality', particularly in areas of serious water stress and this would certainly represent a much needed step change for development in the region.

3.2.16 In terms of the shortlisted eco-town locations, all four of these are situated in areas that are likely to be the focus of further growth in the future: the London-Stansted-Cambridge-Peterborough Growth Area (Hanley Grange and North East Elsenham); Norwich Growth Point (Coltishall/Rackheath); and the Milton Keynes – South Midlands Growth Area, which includes Luton and Bedfordshire (Marston). For this reason, and from a regional or sub-regional perspective, should the eco-towns go ahead they are unlikely to generate adverse impacts over-and-above what might reasonably be expected in the future given current growth priorities and trajectories. Impacts at the local level are, of course, a different matter and these are addressed in the relevant locational chapter.

South West

3.2.17 The South West is geographically the largest of the English regions and it has a population of approximately five million. The region has the largest proportion of older people of any English region and the population is also the most dispersed with around 35 per cent living in settlements of fewer than 10,000 people[32]. Some parts of the region are very sparsely populated and accessibility varies. The larger urban areas, such as Bristol, Plymouth, Bournemouth and Swindon are the most significant employment locations and this role is of increasing importance. Nevertheless, the South West is usually seen as a maritime and largely rural region.

3.2.18 The population of the South West is set to grow and coupled with increasing household formation and acute affordability issues across the region (heightened in some places by high second home ownership) means that demand for housing could surpass 20,000 additional dwellings per annum. The draft RSS for the South West underwent Examination in Public between April-July 2007 and the Panel Report which emerged from this process recommends that Restormel Borough Council provide 15,700 dwellings within the next 20 years. The Secretary of State published Proposed Changes to the draft Regional Spatial Strategy for the South West[33]. The Secretary of State's Proposed Changes suggest a single policy for West Cornwall with growth of about 33,100 jobs and at least 48,800 homes, distributed amongst the local authorities with Restormel (district wide) continuing to accommodate 15,700 homes.

[32] South West Regional Assembly (2006). *The Draft Regional Spatial Strategy for the South West 2006-2026* [online] www.southwest-ra.gov.uk/media/SWRA/RSS%20Documents/Final%20Draft/draftrssfull.pdf (accessed 14 October 2008).

[33] The consultation period on the Proposed Changes ended on 17 October 2008.

3.2.19 The Government has shortlisted the eco-town of St Austell, Restormel Borough Council, Cornwall County Council. This proposed town of approximately 5,000 dwellings in the China Clay area around St Austell could contribute significantly to the RSS proposed housing figure and provide a modest contribution to easing affordability issues within the Region. The singular nature of the site within the South West prevents analysis of wider cumulative impacts and the relevant chapter should be referred to in order to view the mitigation/enhancement of the sustainability effects of the eco-town.

South East

3.2.20 The South East is the most populous English region with a population of 8.2 million people in 2006[34]. The South East has the highest employment rate of any UK region at 79.5 per cent and the lowest unemployment rate at 3.8 per cent[35] and is considered to be the least deprived of all the English regions. However, the region has pockets of severe deprivation; there are over 400,000 people classed as deprived in the South East[36]. Around 80 per cent of the South East is classified as 'rural' and one third of the region is designated as Areas of Outstanding Natural Beauty (AONB) – nearly one third of the total AONBs in England[37]. The South East is home to the New Forest National Park (with a further national park proposed in the South Downs) and 16 per cent of the region is designated as Green Belt. The South East also contains 40 per cent of the nation's ancient woodland[38]. The region produces more CO_2 than any other region at 14 per cent above the national average[39]; has relatively high per capita water consumption at 152 litres per day[40]; and has a larger ecological footprint than any other region in England (17 per cent above the national average)[41].

[34] Government Office for the South East (2008). *Secretary of State's Proposed Changes to the Draft South East Plan – Companion Document* [online] gose.limehouse.co.uk/portal/rss/pcc/consult (accessed 13 October 2008).

[35] Ibid

[36] South East England Development Agency (2006). *The Profile of South East England* [online] www.seeda.co.uk/publications/Research_&_Economics/Docs/ProfileSouthEastEngland2006.pdf (accessed 14 October 2008).

[37] Ibid

[38] Environment Agency (2007). *State of the Environment 2007: An assessment of the environment in South East England* [online] www.environment-agency.gov.uk/commondata/acrobat/soe07final_1941006.pdf (accessed 14 October 2008).

[39] South East England Regional Assembly et al (2008). *The South East Regional Sustainability Framework* [online] www.southeast-ra.gov.uk/documents/sustainability/rsf_2008/rsf_main.pdf (accessed 14 October 2008).

[40] Environment Agency (2007). *State of the Environment 2007: An assessment of the environment in South East England* [online] www.environment-agency.gov.uk/commondata/acrobat/soe07final_1941006.pdf (accessed 14 October 2008).

[41] South East England Regional Assembly et al (2008). *The South East Regional Sustainability Framework* [online] www.southeast-ra.gov.uk/documents/sustainability/rsf_2008/rsf_main.pdf (accessed 14 October 2008).

3.2.21 The South East is set to experience significant levels of population growth. The latest population projections indicate that the region's population may grow by an unprecedented 64,300 per year over the next 20 years, exceeding a total of 9.5 million by 2026[42]. Affordability problems in the South East are acute: according to the South East England Regional Assembly, there are no areas in the region where lower quartile earnings alone are sufficient to allow the purchase of a house in the lower quartile price bracket based on standard mortgage income multiples[43]. Completions of affordable homes are also running at some 30 per cent below the rates set out in the Draft South East Plan[44]. The Secretary of State's Proposed Changes to the South East Plan provide for 33,125 additional dwellings per annum over the period 2006 – 2026; however, this level of provision is likely to be insufficient to accommodate the forecast number of emerging households (35,900 per annum) and combat the housing backlog (the region has 29,000 households in bed and breakfast and concealed/sharing households)[45]. Although actual rates of housing delivery in the South East have increased in recent years to an average of 28,800 homes per annum[46], this level of provision is clearly insufficient to satisfy housing need. In terms of delivery, levels of housing completions on previously developed land continuing to exceed regional targets; however, there are concerns about whether this can be sustained in the medium to longer term since the supply of land available, in particular derelict and vacant land within urban areas appears to be decreasing[47]. In light of this, the South East England Regional Assembly has argued that *"While an urban focus will continue to be at the heart of the spatial strategy in the South East … If housing provision is to be significantly increased in the medium to long-term, an alternative strategy may be required with significant implications for the level of greenfield development"*[48].

3.2.22 The Government has shortlisted three eco-town locations in the South East: Whitehill-Bordon; Weston Otmoor; and Ford. In light of the housing shortfall and the affordability problems in the region, there is little doubt that the provision of further housing will, generally speaking, assist in promoting economic growth and social inclusion, particularly since the locations are all in areas of the region experiencing very high or extreme housing affordability

[42] Office for National Statistics (2008). *Subnational Population Projections (SNPP) for England* [online] www.statistics.gov.uk/statbase/Product.asp?vlnk=997 (accessed 14 October 2008).

[43] South East England Regional Assembly (2007). *Regional Monitoring Report 2007* [online] www.southeast-ra.gov.uk/success_monitoring_reports.html (accessed 14 October 2008).

[44] Ibid

[45] Scott Wilson and Levett-Therivel Sustainability Consultants (2008). *Regional Spatial Strategy for the South East: Sustainability Appraisal and Habitats Regulations Assessment/Appropriate Assessment of the Secretary of State's Proposed Changes* [online] gose.limehouse.co.uk/portal/rss/pcc/consult (accessed 14 October 2008).

[46] South East England Regional Assembly (2007). *Regional Monitoring Report 2007* [online] www.southeast-ra.gov.uk/success_monitoring_reports.html (accessed 14 October 2008).

[47] Ibid

[48] Ibid

pressure[49]. However, the level of housing development in the South East has raised serious environmental concerns. For example, the SA and HRA of the Secretary of State's Proposed Changes to the South East Plan concluded that the level of growth envisaged could lead to significant environmental costs, particularly in relation to water quality, water resources, biodiversity and flood risk[50]. Generally speaking, and assuming they go ahead, the eco-towns' anticipated environmental credentials should go some way to alleviating their environmental impacts; however, individual eco-towns will inevitably have some impact on the environment, particularly as a result of traffic generation (which could also have adverse economic and social impacts). Importantly for the South East, the Draft Eco-towns PPS raises the prospect of 'water neutrality', particularly in areas of serious water stress and this would certainly represent a much needed step change for development in the region.

3.2.23 In terms of the shortlisted eco-town locations, the development of 5,500 homes at Whitehill-Bordon is already reflected in the housing provision set out in the Secretary of State's Proposed Changes to the Draft South East Plan and does not, therefore, represent additional housing (Note the Proposed Changes indicate that if Whitehill-Bordon is not taken forward, the rest of East Hampshire will not have to accommodate the equivalent number of new homes)[51]. Weston Otmoor is situated in Cherwell District which is set to accommodate 13,400 dwellings over the period 2006-2026 under the Secretary of State's Proposed Changes to the Draft South East Plan. Assuming that new housing at Weston Otmoor is additional to this, then significant sustainability impacts could arise in the locality; however, these are considered in the relevant locational chapter. Ford is situated in Arun District Council which is set to accommodate 11,300 dwellings over the period 2006-2026 under the Secretary of State's Proposed Changes to the Draft South East Plan. Again, assuming that that new housing at Ford is additional to this, then significant sustainability impacts could arise in the locality; however, these are considered in the relevant locational chapter. Taken together, and from a regional or sub-regional perspective, should the eco-towns go ahead they are unlikely to generate adverse impacts over-and-above what might reasonably be expected in the future given current growth priorities and trajectories.

[49] Communities and Local Government (2008). *Eco-towns: Living a greener future – consultation paper* [online] www.communities.gov.uk/publications/housing/ecotownsgreenerfuture (accessed 5 August 2008).

[50] Scott Wilson and Levett-Therivel Sustainability Consultants (2008). *Regional Spatial Strategy for the South East: Sustainability Appraisal and Habitats Regulations Assessment/Appropriate Assessment of the Secretary of State's Proposed Changes* [online] gose.limehouse.co.uk/portal/rss/pcc/consult (accessed 14 October 2008).

[51] Government Office for the South East (2008). *Secretary of State's Proposed Changes to the Draft South East Plan – Companion Document* [online] gose.limehouse.co.uk/portal/rss/pcc/consult (accessed 13 October 2008).

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