

eco-towns

Sustainability Appraisal and Habitats Regulations
Assessment of the Draft Eco-towns Planning Policy
Statement and the Eco-towns Programme

Non-Technical Summary





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Prepared by Scott Wilson for Communities and Local Government

November 2008

Scott Wilson Ltd

Department for Communities and Local Government

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Communities and Local Government
Eland House
Bressenden Place
London
SW1E 5DU
Telephone: 020 7944 4400
Website: www.communities.gov.uk

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Communities and Local Government Publications
PO Box 236
Wetherby
West Yorkshire
LS23 7NB
Tel: 0300 123 1124
Fax: 0300 123 1125
Email: communities@capita.co.uk
Online via the Communities and Local Government website: www.communities.gov.uk

November 2008

Reference number: 08 SCG 05523/nontech

ISBN: 978-1-4098-0709-4

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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 Eco-towns Planning Policy Statement

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

1.2 Eco-towns Programme

1.2.1 The **Eco-towns Programme** has been developed with the aim of getting exemplar eco-towns off the ground, and to bring forward up to 10 schemes with development underway by 2016. The Government has shortlisted a series of potential eco-town locations following an initial call for proposals and is deciding which of the schemes related to the short listed locations will get backing or financial support from Government through funding of associated infrastructure or partner public bodies.

1.3 Background to the PPS and Programme

1.3.1 In July 2007, the Government published the Housing Green Paper, *Homes for the future: more affordable, more sustainable*². This identified three key challenges in relation to housing: demand for homes to buy or rent is growing faster than supply; as house prices have grown faster than wages, it is becoming increasingly difficult for young people to get a step on the housing ladder; and climate change means that we need to provide greener, better-designed housing for the future. Alongside the Housing Green Paper, the Government published a prospectus setting out the vision and outline

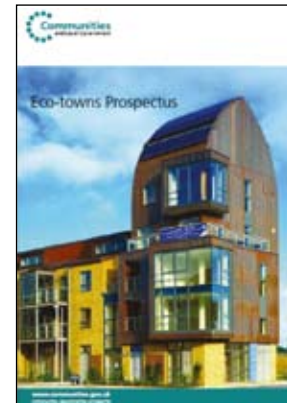
¹ Communities and Local Government (2008). *Draft Planning Policy Statement: Eco-towns – Consultation Document*

² Communities and Local Government (2007). *Homes for the future: more affordable, more sustainable* [online] available at <http://www.communities.gov.uk/publications/housing/homesforfuture> (accessed 5 August 2008)

criteria for **eco-towns**³. The launch of the prospectus was accompanied by an invitation for local authorities, developers and other stakeholders to respond with their views on potential sites.

1.3.2 The Eco-towns Prospectus set out five essential requirements for eco-towns:

- Eco-towns must be **new settlements**, separate and distinct from existing towns but well linked to them. They need to be additional to existing plans, with a minimum target of 5,000–10,000 homes
- The development as a whole should reach **zero carbon** standards, and each town should be an exemplar in at least one area of environmental sustainability
- Eco-town proposals should provide for a **good range of facilities** within the town – a secondary school, a medium scale retail centre, good quality business space and leisure facilities
- **Affordable housing** should make up between 30 and 50 per cent of the total through a wide range and distribution of tenures in mixed communities, with a particular emphasis on larger family homes; and
- A **management body** which will help develop the town, provide support for people moving to the new community, for businesses and to coordinate delivery of services and manage facilities.



1.3.3 Consultation on the Eco-towns Prospectus yielded 57 proposals and Communities and Local Government carried out an initial scrutiny of these in relation to the eco-towns criteria above, and where proposals met these, looked across Government and its agencies at the transport and environment issues and opportunities in the locations put forward. Box 1 provides further information on the initial scrutiny.

³ Communities and Local Government (2007). *Eco-towns Prospectus* [online] available at <http://www.communities.gov.uk/publications/housing/ecotownsprospectus> (accessed 5 August 2008)

Box 1: Communities and Local Government's initial scrutiny

Communities and Local Government initially received **57 expressions of interest for eco-towns**. Communities and Local Government undertook an initial sift of bids broadly against the eco-towns criteria and categorised them as follows:

- Very strong – Overall development of scheme, including environment and transport, addresses the eco-towns criteria with a high quality bid, and in a sustainable location
- Strong – Overall development of scheme, including environment and transport, addresses the eco-towns criteria with a high quality bid, and appears to be in a sustainable location.
- Medium – Overall development of scheme appears reasonably consistent with eco-towns criteria. There may be issues of environment, transport and location.
- Poor – Overall development of scheme insufficient, or not consistent with eco-towns criteria. There are clear issues of environment, transport and location.

Communities and Local Government then applied the following designation criteria to the bids:

- Review – Scheme considered suitable to go forward for cross-Government Review
- Reserved – Scheme not considered suitable for cross-Government Review, however, may be discussed
- List only – Scheme not considered suitable to go forward for full cross-Government Review, however, will be brought to attention of cross-Government and may be discussed.

Communities and Local Government then took forward assessment of the bids through a cross-Government Review of the proposed locations, mainly covering the transport and environment impacts in each case. The Review was carried out at a regional level with Department of Environment, Food and Rural Affairs, Department for Transport, English Heritage, Environment Agency, Government Offices, Highways Agency and Natural England. The agencies were invited to give views on the sustainability impacts of the locations under review, using a banding system from A – F (A = a scheme which meets criteria and no significant issues at this stage; F = a scheme which fails to meet key criteria, including demonstrating additionality of housing numbers, minimum size, or is based on a conventional urban extension approach, lacking an independent centre or facilities). The outcomes of these discussions were recorded through a series of Assessment Summaries available on the Communities and Local Government website.

Box 1: Communities and Local Government's initial scrutiny (continued)

The cross-Government Review identified an emerging list of locations that might be considered to have the potential to go forward to the eco-towns shortlist. All bid promoters were invited to put forward further information in support of their schemes based on control of land, delivery capacity, and infrastructure funding. On the basis of the information provided, Communities and Local Government gave a delivery assessment of strong, medium or weak. All locations were also assessed against housing market pressures on a scale from A – E (A = Extreme affordability pressure; E = Low affordability pressure).

In determining the shortlist of locations with the potential to go forward as an eco-town, the factors taken into account were: a score of C or higher on the banding approach undertaken at the cross-Government Review; the housing market pressure in that area; and the assessment of deliverability. During the assessment process, Communities and Local Government also took informal soundings from local authorities and regional partners before short listing the 15 locations.

The locations going forward into the preliminary consultation (in the document *Living a Greener Future*) performed the most strongly in the initial scrutiny across Government and its agencies in terms of transport and environment issues, affordability benefits and deliverability against eco-towns criteria.

1.3.4 Subsequently, in April 2008, the Government published for consultation *Eco-towns: Living a greener future*⁴ which included a shortlist of the 15 potential eco-town locations which had performed most strongly in the initial scrutiny (see Figure 1):

- Pennbury (Stoughton)
- Manby
- Curborough
- Middle Quinton
- Whitehill-Bordon
- Weston Otmoor
- Ford



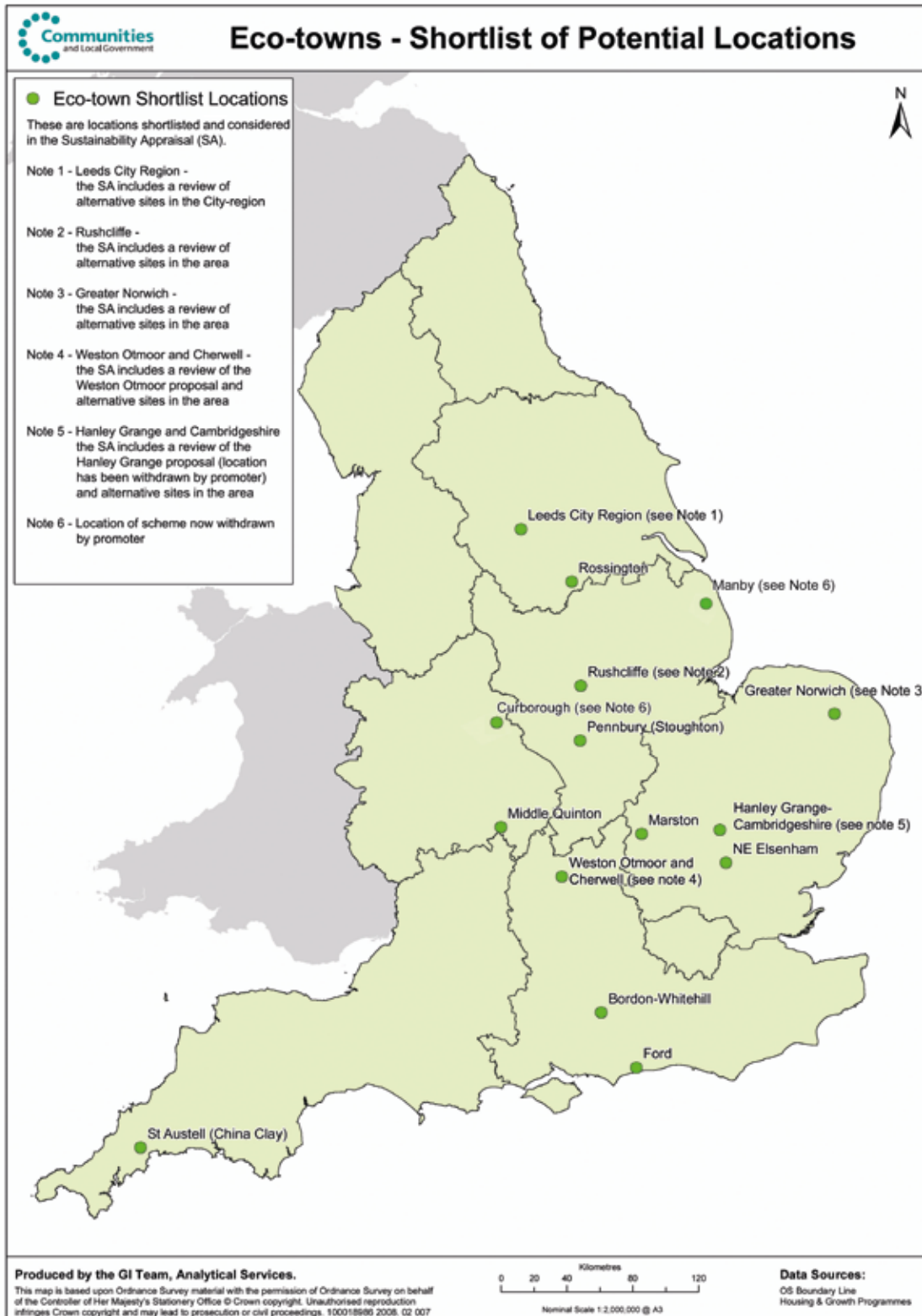
⁴ Communities and Local Government (2008). *Eco-towns: Living a greener future – consultation paper* [online] available at <http://www.communities.gov.uk/publications/housing/ecotownsgreenerfuture> (accessed 5 August 2008)

- St Austell (China Clay Community)
- Rossington
- Coltishall
- Hanley Grange
- Marston
- North East Elsenham
- Rushcliffe
- Leeds City Region

1.3.5 It should be noted that since the shortlist of 15 locations was published in April 2008, bids for four proposals – Manby, Curborough, Coltishall and Hanley Grange – have been withdrawn; however, these locations have nonetheless been included in the SA of the Eco-towns Programme. The SA has also included a focus on areas identified by Communities and Local Government for further review or where reasonable alternatives have been found in the course of the SA: Rushcliffe (which includes alternatives to the original Kingston proposal), Cherwell (which includes alternatives to the Western Otmoor proposal, and the Greater Norwich area (which includes Rackheath – an alternative to the original Coltishall proposal). Figure 1 shows the 15 potential eco-town locations (including schemes that the promoter has withdrawn). In Leeds City Region the local authority partnership has proposed a number of urban eco-communities which would test eco-town principles on brownfield sites and this is being pursued in further discussion with Communities and Local Government.

1.3.6 *Living a greener future* included a commitment that the shortlist of locations would “be subject to a more detailed Sustainability Appraisal (SA) which will provide greater detail on environmental sustainability and other issues”.

Figure 1: Shortlist of potential eco-town locations



1.4 Sustainability Appraisal and Habitats Regulations Assessment

1.4.1 **Sustainability Appraisal (SA)** is generally not undertaken at the national level. In developing the Eco-towns PPS and the Eco-towns Programme, Communities and Local Government has decided to undertake SA, incorporating the requirements of the European Strategic Environmental Assessment Directive⁵, at a level proportionate to the PPS and the Programme. Scott Wilson was commissioned to undertake the SA as well as a **Habitats Regulations Assessment (HRA)** of the Draft Eco-towns PPS and the Eco-towns Programme (the potential eco-town locations). SA seeks to identify and evaluate the impacts of a proposal on the economy, the community and the environment – the three dimensions of sustainable development – and suggest measures for improving the proposal's sustainability performance. HRA tests the impacts of a proposal on nature conservation sites of European importance – Special Areas of Conservation and Special Protection Areas – and is also a requirement under EU legislation for certain plans and projects⁶.

1.5 This report

1.5.1 This report summarises the findings of, firstly, the SA and, secondly, the HRA of the Draft Eco-towns PPS and the Eco-towns Programme. The main reports are available for download on the Communities and Local Government website.

⁵ Directive 2001/42/EC on the assessment of the effects of certain plans and Programmes on the environment (the 'SEA Directive') implemented through The Environmental Assessment of Plans and Programmes Regulations 2004

⁶ Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (the 'Habitats Directive') implemented through The Conservation (Natural Habitats, &c.) (Amendment) Regulations 2007

2 Sustainability Appraisal

2.1 Introduction

2.1.1 This section summarises the findings of the **Sustainability Appraisal (SA)** of the Draft Eco-towns PPS and the Eco-towns Programme. The section begins with a summary of the policy context in which the Draft PPS and the Programme are being developed; the sustainability objectives which they should ideally take account of; and the situation now in terms of housing provision and the development of greener, more environmentally friendly housing. This is followed by an appraisal of the business-as-usual option, ie the how the situation now is likely to evolve in the absence of the Draft Eco-towns PPS and the Eco-towns Programme. The SA findings are then set out, firstly, in relation to the Draft PPS, ie the eco-towns concept and the standards governing their delivery and, secondly, in relation to the Eco-towns Programme, ie the shortlisted eco-town locations themselves. The section then concludes with our proposals for monitoring and, finally, what happens next in the SA process. The difficulties encountered in undertaking the appraisal are set out in the main report.

2.2 What's the policy context?

2.2.1 This section highlights those policies, plans, programmes, strategies and initiatives considered particularly significant to the development of the Draft Eco-towns PPS and the Eco-towns Programme.

Barker Review of Housing Supply (March 2004)

The Barker Review of Housing Supply⁸ identified a lack of responsiveness in the housing market to increased demand as well as growing evidence of a persistently inadequate supply of new homes (according to the report, in 2001, the construction of new houses in the UK fell to its lowest level since the Second World War). The report concluded that continuing with the current rate of house building was not a realistic option given that an inadequate supply of housing means constraining economic growth; greater risk of macroeconomic instability; and worsening affordability. With regard to affordability, Barker argued that in order to reduce the trend in real house prices to 1.8 per cent per annum (from 2.4 per cent), an additional 70,000 extra houses might be required in England each year (over-and-above the 140,000 private sector gross starts and 125,000 gross completions in England in 2002-03). To bring the real price trend in line with the EU average of 1.1 per cent, the report stated that an extra 120,000 houses each year might be required. Barker acknowledged that increased levels of house building would have adverse impacts on the environment. However, a subsequent study of the sustainability impacts associated with additional housing growth concluded that the scale of these impacts could be reduced through a variety of measures including the specification and enforcement of higher dwelling environmental performance standards⁹.



⁷ Barker, K. (2004). *Delivering stability: securing our future housing needs* [online] available at: http://www.hm-treasury.gov.uk/consultations_and_legislation/barker/consult_barker_index.cfm#report (accessed 13 August 2008)

⁸ Office of the Deputy Prime Minister (2005). *A sustainability impact study of additional housing scenarios in England* [online] available at: <http://www.communities.gov.uk/publications/housing/sustainabilityimpact> (accessed 13 August 2008)

The UK Sustainable Development Strategy (March 2005)

The UK Sustainable Development Strategy – *Securing the future: delivering UK sustainable development strategy*¹⁰ – emphasises that the goal of sustainable development “is to enable all people throughout the world to satisfy their basic needs and enjoy a better quality of life, without compromising the quality of life of future generations”. In order to achieve sustainable development, the Strategy identifies five guiding principles:

- Living within environmental limits
- Ensuring a strong, healthy and just society
- Achieving a sustainable economy
- Promoting good governance
- Using sound science responsibly



The Strategy emphasises that for “a policy to be sustainable, it must respect all five of these principles”. In addition, the Strategy identifies four priority areas for immediate action:

- Sustainable consumption and production (‘achieving more with less’)
- Climate change and energy
- Natural resource protection and environmental enhancement
- Sustainable communities

⁹ HM Government (2005). *Securing the future: delivering UK sustainable development strategy* [online] available at: <http://www.defra.gov.uk/sustainable/government/publications/uk-strategy/index.htm> (accessed 2 October 2008)

Planning Policy Statement 3: Housing (November 2006)

The Government's key housing policy goal, as set out in Planning Policy Statement 3: Housing (PPS3)¹¹ is to ensure that everyone has the opportunity of living in a decent home, which they can afford, in a community where they want to live. A principal aim of PPS3 is to underpin the increase in housing delivery recommended by the Barker Review of Housing Supply through promoting a new, more responsive approach to land supply at the local level. In particular the planning system should deliver *"A sufficient quantity of housing taking into account need and demand and seeking to improve choice"* and

"Housing developments in suitable locations, which offer a good range of community facilities and with good access to jobs, key services and infrastructure". PPS3 also emphasises that Local Planning Authorities should encourage applicants to bring forward sustainable and environmentally friendly new housing developments. In particular, PPS3 states that, where need and demand are high, it will be necessary *"to identify and explore a range of options for distributing housing including consideration of the role of growth areas, growth points, new free-standing settlements, major urban extensions and the managed growth of settlements in urban and rural areas and/or where necessary, review of any policy constraints"*.



Code for Sustainable Homes (December 2006)

The Code for Sustainable Homes measures the sustainability of a new home against nine categories of sustainable design¹² and uses a 1 to 6 star rating system to communicate the overall sustainability performance of a new home. Minimum standards for energy and water use are set at each level. Since 1 May 2008, a rating against the Code has been mandatory for new homes. The aim of the Code is to improve the overall sustainability of new homes by setting a single national standard within which the house building industry can design and construct homes to higher environmental standards.



¹⁰ Communities and Local Government (2006). *Planning Policy Statement 3: Housing* [online] available at: <http://www.communities.gov.uk/publications/planningandbuilding/pps3housing>

¹¹ Energy and CO₂ emissions; water; materials; surface water run-off; waste; pollution; health and wellbeing; management; and ecology.

Housing Green Paper (July 2007)

The 2007 Housing Green Paper, *Homes for the future: more affordable, more sustainable*¹³, identified three key challenges in relation to housing: demand for homes to buy or rent is growing faster than supply; as house prices have grown faster than wages, it is becoming increasingly difficult for young people to get a step on the housing ladder; and climate changes means that we need to provide greener, better-designed housing for the future. In light of this, the Green Paper commits the Government to working with partners to provide:



- more homes to meet growing demand;
- well-designed and greener homes, linked to good schools, transport and healthcare; and
- more affordable homes to buy or rent.

In terms of providing more homes, the Green Paper sets a target of delivering 240,000 additional homes a year by 2016 to meet growing demand and address affordability issues. The level of housing supply is assumed to increase over time towards this target, delivering approximately two million new homes by 2016 and, assuming the target is maintained, an additional million new homes by 2020, making three million in total. In relation to greener homes, the Green Paper emphasises that *“New housing needs to be much more sustainable for the future. We need a revolution in the way we build, design and power our homes”*. In relation to eco-towns, the Green Paper states that these *“will build on the UK’s rich historic experience of creating planned new settlements” and will be “entirely new towns which are exemplar “green developments”... designed to meet the highest standards of sustainability, including low and zero carbon technologies and good public transport”*. In spatial terms, *“eco-towns will complement town and city centre renewal, urban extensions and the redevelopment of major sites in existing urban areas”*. Crucially, they are envisaged to *“provide an excellent opportunity to show how homes can be built to higher environmental standards with potential for lower cost”*.

¹² Communities and Local Government (2007). *Homes for the future: more affordable, more sustainable* [online] available at <http://www.communities.gov.uk/publications/housing/homesforfuture> (accessed 5 August 2008).

Building a Greener Future (July 2007)

The *Building a Greener Future: Policy Statement*¹⁴ confirmed the Government's intention for all new homes in England and Wales to be zero carbon by 2016 and included a timetable for revising Part L of the Building Regulations in order to achieve this – see the table below. Zero carbon is defined as meaning that, over a year, the net carbon emissions from all energy use in the home would be zero. The Government will also shortly introduce new regulatory standards for water efficiency in new homes (Part G of the Building Regulations). In addition, in the 2008 Budget it was announced that all new non-domestic buildings would be zero carbon from 2019 and that the Government would consult on the timeline for this ambition and its feasibility, and review progress in 2013¹⁵.

Date	2010	2013	2016
Energy/carbon improvement as compared to Part L (Building Regulations 2006)	25%	44%	Zero carbon
Equivalent energy/carbon standard in the Code	Code level 3	Code level 4	Code level 6

Planning and Climate Change (December 2007)

In December 2007, the Government published *Planning Policy Statement: Planning and Climate Change – Supplement to Planning Policy Statement 1*¹⁶. This emphasises that tackling climate change is a key priority for the planning system and sets out how planning should contribute to reducing emissions and stabilising climate change while taking into account the unavoidable consequences. In providing for development, planning authorities should “secure the highest viable resource and energy efficiency and reduction in emissions” and “deliver patterns of urban growth and sustainable rural developments that help secure the fullest possible use of sustainable transport for moving freight, public transport, cycling and walking; and, which overall, reduce the need to travel, especially by car”.



¹³ Communities and Local Government (2007). *Building A Greener Future* [online] available at <http://www.communities.gov.uk/publications/planningandbuilding/building-a-greener> (accessed 5 August 2008).

¹⁴ Directgov (2008). *Budget 2008 – protecting the environment* [online] available at: http://www.direct.gov.uk/en/N11/Newsroom/Budget2008/DG_073094 (accessed 8 October 2008)

¹⁵ Communities and Local Government (2007). *Planning Policy Statement: Planning and Climate Change* [online] available at <http://www.communities.gov.uk/publications/planningandbuilding/ppscclimatechange> (accessed 5 August 2008).

NHPAU advice (June 2008)

The National Housing and Planning Advice Unit (NHPAU) was established in response to the Barker Review of Housing Supply and is tasked with helping to make market housing more affordable and with addressing the rising trend in the number of people prevented from getting onto the property ladder. According to the NHPAU's latest advice, all things being equal, emerging Regional Spatial Strategies provide for insufficient housing and would lead to a further worsening of affordability prospects. Although the NHPAU welcomes the Government's commitment to increase housing supply to 240,000 net additions a year by 2016 as an important step towards stabilising affordability, it recommends, taking into the account the most up-to-date evidence, that Regional Planning Bodies may want to go further¹⁷. In light of this, the NHPAU's most recent advice sets out a housing supply range for each region which they consider should be tested by regional partners, as early as possible, through the planning process – see the table below. Taken together, the upper end of their regional supply ranges would see 297,700 new homes delivered per annum in England by 2016.

Region	BOTTOM OF THE PROPOSED HOUSING SUPPLY RANGE				UPPER END OF THE PROPOSED HOUSING SUPPLY RANGE			
	Average annual net additions to 2026	Peak delivery point by 2016	Total net additions by 2016	Total net additions by 2026	Average annual net additions to 2026	Peak delivery point by 2016	Total net additions by 2016	Total net additions by 2026
North East	6,700	6,600	61,500	87,800	7,000	7,000	66,800	97,300
North West	26,600	27,600	228,900	336,300	29,700	31,300	247,700	373,000
Yorkshire & Humber	23,800	25,100	202,100	302,500	26,400	28,300	218,300	331,700
East Midlands	23,400	23,700	207,000	301,900	24,600	25,300	214,500	315,500
West Midlands	19,000	19,800	154,100	243,200	22,000	24,300	186,000	283,700
East of England	30,600	32,100	259,900	398,000	39,200	43,000	314,300	486,300
London	33,800	35,500	296,600	428,500	42,600	46,700	342,400	529,100
South East	37,800	38,700	331,500	486,200	49,700	53,800	407,200	622,500
South West	29,800	31,000	255,600	379,600	34,800	37,400	287,400	436,800
England	231,500	240,100	1,996,900	2,957,000	276,900	297,700	2,285,200	3,475,900



¹⁶ National Housing and Planning Advice Unit (2008). *Meeting the housing requirements of an aspiring and growing nation: taking the medium and long-term view – Advice to the Minister about the housing supply range to be tested by Regional Planning Authorities* [online] available at: <http://www.communities.gov.uk/nhpau/keypublications/reports/meetinghousingrequirements/> (accessed 5 August 2008)

Climate Change Bill (anticipated late 2008)

The Climate Change Bill sets out the Government's long term targets for climate change. The Government has accepted the advice of the Climate Change Committee that the targets should be framed in terms of greenhouse gas emissions, and that the 2050 target should be an 80% reduction in those emissions from a 1990 baseline. The Bill also requires carbon budgets to be established which will set a limit on emissions. The budgets should ensure a reduction of at least 26% by 2020. The Climate Change Committee will be advising the Government in December 2008 on the first three carbon budgets (for the period 2008-2022). The Government will respond to that advice next year, taking account also of any agreement in the European Union on EU targets for greenhouse gas emissions reductions.¹⁹

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

- 2.3.1 Some of the key sustainability objectives relevant to the appraisal of the Draft Eco-towns PPS and the Eco-towns Programme are set out in Table 1.

Table 1: Key sustainability objectives

Source	Objective
Housing provision	
Planning Policy Statement 3: Housing	Ensure that everyone has the opportunity of living in a decent home, which they can afford, in a community where they want to live
	Improve affordability across the housing market, including by increasing the supply of housing
Housing Green Paper	Increase housing supply to 240,000 additional homes a year by 2016 (delivering 2 million homes by 2016 and 3 million homes by 2020)
Greener housing	
Building a Greener Future: Policy Statement	All new homes to be zero carbon from 2016 (with a progressive tightening of the energy efficiency building regulations in the interim)

¹⁷ Full PM speech text, of 19 November 2007, can be found at: www.number-10.gov.uk/output/Page13791.asp

¹⁸ For further information see <http://www.defra.gov.uk/environment/climatechange/uk/legislation/provisions.htm>

Table 1: Key sustainability objectives (continued)

Source	Objective
Greener housing	
Planning Policy Statement: Planning and Climate Change – Supplement to Planning Policy Statement 1	In providing for the homes, jobs, services and infrastructure needed by communities, and in renewing and shaping the places where they live and work, regional planning bodies and local planning authorities should – through spatial strategies – secure the highest viable resource and energy efficiency and reduction in emissions
	Regional planning bodies and local planning authorities should – through spatial strategies – deliver patterns of urban growth and sustainable rural developments that help secure the fullest possible use of sustainable transport for moving freight, public transport, cycling and walking; and, which overall, reduce the need to travel, especially by car.
	Regional planning bodies and local planning authorities should – through spatial strategies – secure new development and shape places that minimise vulnerability, and provide resilience, to climate change; and in ways that are consistent with social cohesion and inclusion.
	Regional planning bodies and local planning authorities should – through spatial strategies – conserve and enhance biodiversity, recognising that the distribution of habitats and species will be affected by climate change.
	Regional planning bodies and local planning authorities should – through spatial strategies – reflect the development needs and interests of communities and enable them to contribute effectively to tackling climate change.
	Regional planning bodies and local planning authorities should – through spatial strategies – respond to the concerns of business and encourage competitiveness and technological innovation in mitigating and adapting to climate change.
Climate Change Bill	Reduce carbon dioxide emissions through domestic and international action by at least 80 per cent by 2050 and at least 26 per cent by 2020, against a 1990 baseline.
Future Water: The Government's water strategy for England	Reduce per capita consumption of water through cost effective measures, to an average of 130 litres per person per day (l/p/d) by 2030, down from the current 150l/p/d.
	Water efficiency playing a prominent role in achieving a sustainable supply demand balance, with high standards of water efficiency in new homes, and water-efficient products and technologies improving standards in existing buildings.
	More adaptable drainage systems delivering reduced flood risk, improved water quality, and decreasing burdens on the sewer system.
	Consistent and holistic management of urban flood risk, with strategic planning, partnerships of responsible bodies and clear understanding of various flood risk responsibilities.

2.4 What's the situation now?

Housing provision

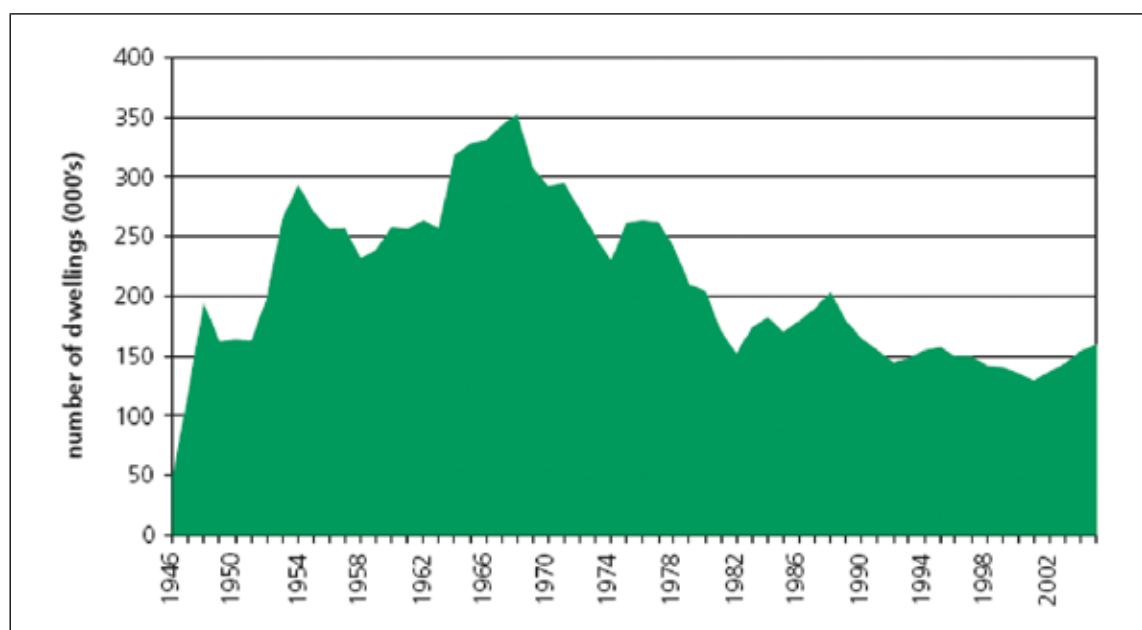
- 2.4.1 Put simply, the provision of new homes has failed to keep pace with the numbers of new households; according to the Housing Green Paper, while the housing stock is growing by 185,000 a year, the number of households is projected to grow at 223,000 a year, many of them people living alone¹⁹ (in 1971, 19 per cent of households were one-person households; the figure now stands at 32 per cent²⁰). The Housing Green Paper also emphasises that there are 87,000 households living in temporary accommodation, including around 4,000 in bed and breakfast and that the number of households waiting for social housing has risen from 1 million to 1.6 million over the last ten years.
- 2.4.2 The number of new homes being completed has increased by 30 per cent since 2002 and is now at its highest level for 17 years²¹ (although this will be reduced by the current downturn). However, as the Barker Review pointed out, in 2001 the construction of new houses in the UK fell to its lowest level since the Second World War²²; progress is being made from a low base – see Figure 2.

¹⁹ Communities and Local Government (2007). *Homes for the future: more affordable, more sustainable* [online] available at <http://www.communities.gov.uk/publications/housing/homesforfuture> (accessed 5 August 2008)

²⁰ *Ibid*

²¹ *Ibid*

²² Barker, K. (2004). *Delivering stability: securing our future housing needs* [online] available at: http://www.hm-treasury.gov.uk/consultations_and_legislation/barker/consult_barker_index.cfm#report (accessed 13 August 2008)

Figure 2: New dwelling completions in England²³

2.4.3 The Barker Review recognised housing affordability as a real and growing problem: *“For many people, housing has become increasingly unaffordable over time. The aspiration for home ownership is as strong as ever, yet the reality is that for many this aspiration will remain unfulfilled unless the trend in real house prices is reduced. This brings potential for an ever widening social and economic divide between those able to access market housing and those kept out”*²⁴. A recent report from the NHPAU reiterates that since 1997 house prices have increased by more than 150 per cent in real terms, while lower quartile house prices reached 7.25 times lower quartile annual earnings²⁵.

2.4.4 In order to accommodate new housing, emerging Regional Spatial Strategies (RSSs) are generally promoting a model of urban concentration. For example, the emerging South West RSS states, *“The primary focus for development in the South West will be the Strategically Significant Cities and Towns (SSCTs)”*²⁶ while the emerging South East RSS states, *“The prime focus for development in the South East should be urban areas, in order to foster accessibility to employment, housing, retail and other services, and avoid*

²³ Barker, K. (2004). *Delivering stability: securing our future housing needs* [online] available at: http://www.hm-treasury.gov.uk/consultations_and_legislation/barker/consult_barker_index.cfm#report (accessed 13 August 2008)

²⁴ *Ibid*

²⁵ National Housing and Planning Advice Unit (2008). *Affordability Still Matters* [online] available at <http://www.communities.gov.uk/nhpau/keypublications/reports/affordabilitystillmatters/> (accessed 5 August 2008)

²⁶ Government Office for the South West (2008). *The Draft Revised Regional Spatial Strategy for the South West incorporating the Secretary of State’s Proposed Changes – for Public Consultation July 2008* [online] available at: http://gosw.limehouse.co.uk/portal/regional_strategies/drss (accessed 15 August 2008)

*unnecessary travel*²⁷. Although the model of urban concentration continues to prevail, recent years have witnessed some renewed interest in new settlements with developments at, for example, Northstowe in Cambridgeshire and Dickens Heath in Solihull. The TCPA argues that *“there are the beginnings of a new wave of new settlements and urban extensions”*²⁸.

Greener housing

2.4.5 In 2005 the UK’s total carbon dioxide emissions were 556 MtCO₂; emissions from the domestic housing sector represent around 27 per cent of this figure – these emissions come from energy use in the home for heating, hot water, lighting and appliances²⁹. Figure 3 shows the proportion of UK greenhouse gas emissions (the basket of greenhouse gases covered by the Kyoto Protocol)³⁰ by end user attributable to the residential sector. Figure 4 shows that nearly three-quarters of domestic emissions of CO₂ come from heating and hot water, and around one-fifth is from lighting and appliances. Household energy efficiency has noticeably improved over the last decade: in the period 1 April 1996 to 31 March 2006, local authorities reported an overall improvement in domestic energy efficiency of the housing in their area of approximately 19.26 per cent, as measured against a 1996 baseline³¹.

²⁷ Government Office for the South East (2008). *Secretary of State’s Proposed Changes – Companion Document* [online] available at: <http://gose.limehouse.co.uk/portal/rss/pcc/consult> (accessed 15 August 2008)

²⁸ Town and Country Planning Association (2007). *Best Practice in Urban Extensions and New Settlements* [online] available at: http://www.tcpa.org.uk/downloads/20070606-NSUE.pdf?bcsi_scan_F6892CABA15785B4=0&bcsi_scan_filename=20070606-NSUE.pdf (accessed 6 August 2008)

²⁹ Communities and Local Government (2007). *Building A Greener Future* [online] available at <http://www.communities.gov.uk/publications/planningandbuilding/building-a-greener> (accessed 5 August 2008)

³⁰ The basket of greenhouse gases is made up of carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons and sulphur hexafluoride, weighted by global warming potential.

³¹ Department for the Environment, Food and Rural Affairs (2007). *Consultation on the Review of the Home Energy Conservation Act 1995 (HECA)* [online] available at: <http://www.defra.gov.uk/corporate/consult/heca/consultation.pdf> (accessed 15 August 2008)

Figure 3: UK greenhouse gas emissions by end user, 1990 to 2006³²

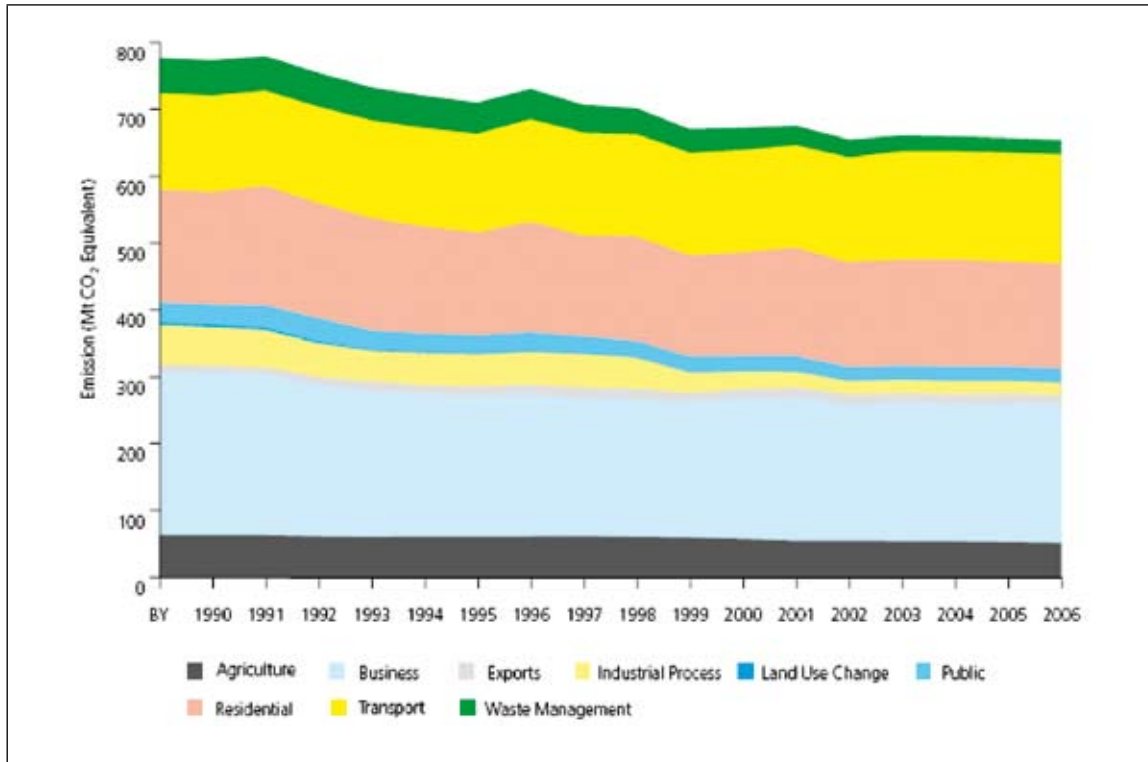
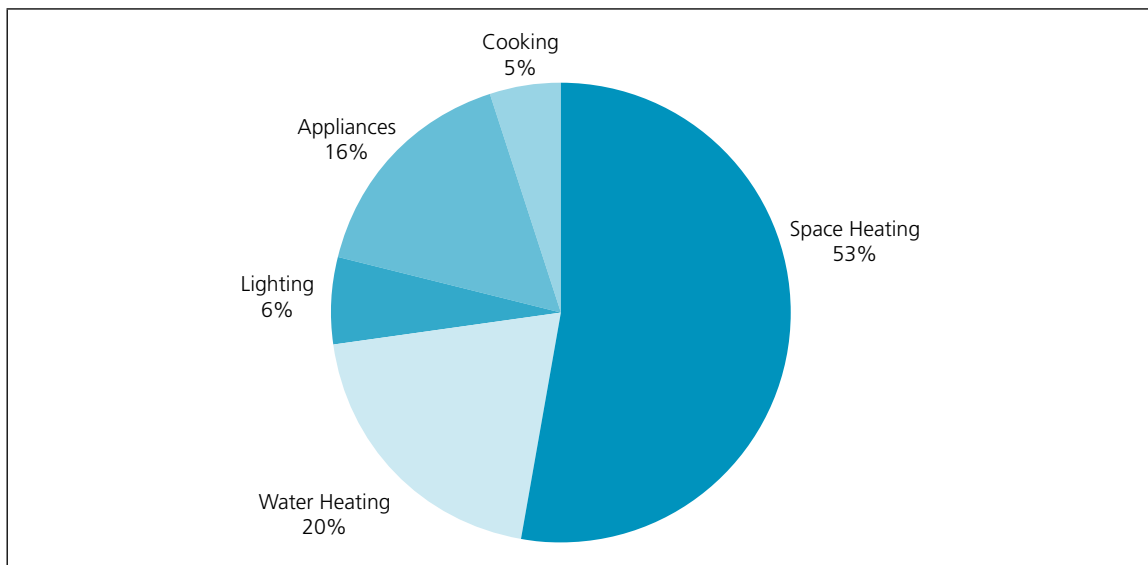


Figure 4: Domestic carbon emissions by source (2005)³³



³² Department for the Environment, Food and Rural Affairs (2008). *UK Climate Change Programme Annual Report to Parliament, July 2008* [online] available at: <http://www.defra.gov.uk/environment/climatechange/uk/ukccp/pdf/ukccp-ann-report-july08.pdf>

³³ Communities and Local Government (2007). *Building A Greener Future* [online] available at <http://www.communities.gov.uk/publications/planningandbuilding/building-a-greener> (accessed 6 August 2008)

2.4.6 In relation to water use, average household demand has increased by around 55 per cent over the last 25 years and continues to increase at 1 per cent per annum³⁴. In 2005/06, average water consumption in England and Wales was around 150 litres per person per day (l/p/d); this compares to an average consumption per person of around 140 l/p/d in 1992/93³⁵. The increased demand for water has been largely attributed to an increase in the number and range of appliances in households and increases in the frequency of their use, and to changes in household size (water use in a single-person household is typically 40 per cent higher than the average per person consumption in a two-person household)³⁶.

2.4.7 Table 2 sets out some of the other key environmental trends relevant to greener housing.

Table 2: National environmental trends

Issue	Trend
Biodiversity	Approximately two-thirds of England is arable, horticultural or improved grassland and the remaining one-third contains the majority of the habitats of biodiversity interest ³⁸ . Natural England emphasise that over the last 50 years or so England's natural environment has suffered serious losses and that <i>"over much of England, intensive farming, built development and commercial forestry have resulted in habitats that support a very limited biodiversity"</i> ³⁹ . Furthermore, <i>"Many of the surviving wildlife-rich sites form a small, isolated and fragmented resource"</i> ⁴⁰ . Natural England emphasise that pressures on the environment sometimes present opportunities, for example natural green space can be provided within new housing developments ⁴¹ .
Flood risk	In 2006, ten per cent of dwellings in England were built in Flood Zone 3 (FZ3) and seven per cent of land changing to residential use was within areas of high flood risk. This compares to nine and six per cent, respectively in 2005 ⁴² . FZ3 encompasses Zone 3a – areas with a high probability of flooding – and Zone 3b – the functional flood plain (land where water has to flow or be stored in times of flood). If the trend for ten per cent of dwellings being built in areas of high flood risk continues, 300,000 new homes will be built in areas of flood risk by 2020 if the target of 3 million new homes is met.

³⁴ Communities and Local Government and Department for Environment, Food and Rural Affairs (2007). *Water efficiency in new buildings: a joint Defra and Communities and Local Government policy statement* [online] available at: <http://www.communities.gov.uk/publications/planningandbuilding/water-efficiency> (accessed 20 September 2008)

³⁵ *Ibid*

³⁶ *Ibid*

³⁷ Natural England (2008). *State of the Natural Environment 2008* [online] available at: <http://www.naturalengland.org.uk/son/default.htm> (accessed 3 October 2008)

³⁸ *Ibid*

³⁹ *Ibid*

⁴⁰ *Ibid*

⁴¹ Communities and Local Government (2008). *Land Use Change Statistics (England) 2007 – provisional estimates (July 2008)* [online] available at: <http://www.communities.gov.uk/corporate/908800> (accessed 3 October 2008)

Table 2: National environmental trends (continued)

Issue	Trend
Landscape	According to Natural England, existing landscape character is being maintained in 51 per cent of England's landscapes, whilst in a further 10 per cent existing character is being enhanced. However, 20 per cent of England's landscapes are showing signs of neglect, in the sense that past loss of character has not been reversed, while in a further 19 per cent new landscape characteristics are emerging ⁴³ . Furthermore, areas where the landscape character was neglected or 'diverging' are generally close to major centres of population and transport routes ⁴⁴ . Landscape change is particularly evident in a belt running from the Severn and Avon Vales through the West Midlands to Humberside ⁴⁵ .
Land use	The percentage of new dwellings arising from building on previously developed land or through the conversion of existing buildings increased from 54 per cent in 1990 to 75 per cent in 2007 (provisional estimate) ⁴⁶ . The percentage of all new development (not just residential) occurring on previously developed land (measured by land area) also increased from 47 per cent in 1990 to 61 per cent in 2005 ⁴⁷ . The density of newly built dwellings in England remained reasonably constant between 1993 and 2001, at an average of 25 new dwellings per hectare; however, density has increased in recent years and, in 2007, the figure was 45 new dwellings per hectare (provisional estimate) ⁴⁸ .
Renewable energy	In 2006, renewable sources represented 4.6 per cent of all electricity generated, increasing from 1.8 per cent in 1990; in particular, between 1990 and 2006 generation from non-hydropower sources (wind, wave, solar and biofuels) increased from being 10 per cent of all renewable electricity generated to 75 per cent ⁴⁹ .
Transport	Between 1971 and 2006, the proportion of households in Great Britain with access to a car increased from 51 per cent to 77 per cent ⁵⁰ . Daily traffic flows in Great Britain increased by 16 per cent in the ten years to 2005 ⁵¹ . Although rail use has generally been increasing since the early 1980s, the number of journeys made on local buses in England outside London has continued to fall ⁵² .

⁴² Natural England (2008). *State of the Natural Environment 2008* [online] available at: <http://www.naturalengland.org.uk/son/default.htm> (accessed 3 October 2008)

⁴³ *Ibid*

⁴⁴ *Ibid*

⁴⁵ National Statistics (2008). Sustainable development indicators in your pocket 2008 [online] available at: http://www.defra.gov.uk/sustainable/government/progress/documents/SDIYP2008_a6.pdf (accessed 8 October 2008)

⁴⁶ *Ibid*

⁴⁷ *Ibid*

⁴⁸ *Ibid*

⁴⁹ National Statistics (2008). Car access [online] available at: <http://www.statistics.gov.uk/cci/nugget.asp?id=1770> (accessed 8 October 2008)

⁵⁰ National Statistics (2006). Road Traffic [online] available at: <http://www.statistics.gov.uk/cci/nugget.asp?id=1096> (accessed 8 October 2008)

⁵¹ National Statistics (2007). Bus and rail [online] available at: <http://www.statistics.gov.uk/cci/nugget.asp?id=1094> (accessed 8 October 2008)

Table 2: National environmental trends (continued)

Issue	Trend
Transport (continued)	<p>Motor vehicles give rise to greenhouse gas emissions (CO₂) and other pollutant emissions (eg NO_x, PM₁₀). While greenhouse gas emissions have risen, pollutant emissions have fallen. Between 1990 and 2006, total UK CO₂ emissions fell by 6 per cent; however, those attributable to transport rose by 12 per cent⁵³. In 2006 emissions of both nitrogen oxides (NO_x) and particulates (PM₁₀) were 60 per cent and 46 per cent lower than in 1990, respectively⁵⁴. Research suggests that background air quality throughout the UK will improve very significantly over the next 10-15 years, primarily as a result of tightening Euro emission standards for cars and lorries and cleaner energy generation⁵⁵.</p> <p>Transport has an important social dimension: for example, according to 2001 figures, only 21 per cent of people in households with access to a car said they experienced difficulties accessing their chemist, GP, post office, main food shop, or local hospital – compared to 38 per cent in households without a car⁵⁶.</p>
Waste	<p>Between 1996/97 and 2005/06 household waste⁵⁷ generated per person in the UK increased by 9 per cent. In 2005/06, this was equivalent to each person generating an average of 512 kilograms, or just over half a tonne, of waste⁵⁸. The proportion of household waste per person collected for recycling or composting increased from 7 per cent in 1996/97 to 26 per cent in 2005/06⁵⁹ (the Government set a target of 25 per cent of household waste in England to be recycled by 2005/06). The majority of non-recycled waste goes to landfill.</p>

2.4.8 Examples of greener housing at a small scale continue to emerge; the Beddington Zero Energy Development (BedZED) in Sutton, for example, provides for 96 homes and has won countless sustainability awards.

⁵² National Statistics (2008). *Sustainable development indicators in your pocket 2008* [online] available at: http://www.defra.gov.uk/sustainable/government/progress/documents/SDIYP2008_a6.pdf (accessed 8 October 2008).

⁵³ National Statistics (2008). *Sustainable development indicators in your pocket 2008* [online] available at: http://www.defra.gov.uk/sustainable/government/progress/documents/SDIYP2008_a6.pdf (accessed 8 October 2008).

⁵⁴ Grice, S. et al (2006). *Baseline projections of air quality in the UK for the 2006 review of the Air Quality Strategy*, report to Defra et al [online] available at: http://www.airquality.co.uk/archive/reports/cat16/0604041040_baselineprojectionsreport5.pdf (accessed 14 May 2008); and Grice, S. et al. (2007). *Updated projections of air quality in the UK for base case and additional measures for the Air Quality Strategy for England, Scotland, Wales and Northern Ireland 2007*, report to Defra et al [online] available at: http://www.airquality.co.uk/archive/reports/cat17/0707171116_newbaselineandadditionalmeasuresreport_v6.pdf (accessed 14 May 2008). A recent Defra study also suggests that assumptions about vehicle emissions should add 15 per cent to Euro emission standards to take account of real-world effects such as poor maintenance, low tyre pressure, poor driving, and increasing use of air conditioning (Defra (2007). *Passenger transport emissions factors: Methodology paper* [online] available at: <http://www.defra.gov.uk/environment/business/envrpf/passenger-transport.pdf> (accessed 14 May 2008)).

⁵⁵ National Statistics (2002). *Access Local Services* [online] available at: <http://www.statistics.gov.uk/cci/nugget.asp?id=64> (accessed 8 October 2008).

⁵⁶ Household waste includes household bin waste and also waste from civic amenity sites, other household collections and recycling sites.

⁵⁷ National Statistics (2007). *Household waste* [online] available at: <http://www.statistics.gov.uk/cci/nugget.asp?id=1769> (accessed 8 October 2008).

⁵⁸ *Ibid*

However, examples of a green housing on a larger scale are much rarer. Northstowe – a new community of 9,500 homes five miles north-west of Cambridge – is looking to achieve up to 50 per cent reductions in energy use by using approaches such as microgeneration, photovoltaic panels and solar water heating⁵⁹. Greener housing clearly goes beyond energy efficiency to encompass issues such as reduced water consumption and sustainable transport. Again, Northstowe also aims to reduce mains water use by up to 50 per cent and is on the route of the new Cambridgeshire Guided Busway⁶⁰. Other new settlements or urban extensions are exemplars in certain aspects of sustainable development. Cambourne – a new settlement 10 miles west of Cambridge – is cited by the Wildlife Trust as a good example of planning, having been designed around the natural environment⁶¹. An investigation into the lessons from Cambourne concluded that *“One of the best things about Cambourne is the ecology. People very much appreciate the areas of woodland that have been retained and the green spaces that have been created”*⁶². Upton, an urban extension to Northampton of over a 1,000 homes, has a sustainable urban drainage system integrated throughout the site and rainwater harvesting technologies are being incorporated into block and building design to allow for rainwater use within homes⁶³. However, although examples of large scale greener housing are starting to emerge, these remain relatively few and far between and may only be exemplary in relation to one or two aspects of sustainability.

Summary – the situation now

- The supply of new homes has failed to keep pace with the numbers of new households
- For many people, housing has become increasingly unaffordable over time
- A wave of new settlements and urban extensions is underway to provide for new housing
- Housing accounts for over a quarter of the UK's total CO₂ emissions
- A few examples of greener housing on a significant scale are beginning to emerge

⁵⁹ Communities and Local Government (2007). *Eco-towns Prospectus* [online] available at <http://www.communities.gov.uk/publications/housing/ecotownspectus> (accessed 5 August 2008).

⁶⁰ *Ibid*

⁶¹ Communities and Local Government (2008). *Eco-towns: Living a greener future – consultation paper* [online] available at <http://www.communities.gov.uk/publications/housing/ecotownsgreenerfuture> (accessed 5 August 2008)

⁶² Platt, S. (2007). *Lessons from Cambourne* [online] available at: <http://www.inspire-east.org.uk/FileAccess.aspx?id=744> (accessed 15 August 2008)

⁶³ Town and Country Planning Association (2007). *Best Practice in Urban Extensions and New Settlements* [online] available at: http://www.tcpa.org.uk/downloads/20070606-NSUE.pdf?bcsi_scan_F6892CABA15785B4=0&bcsi_scan_filename=20070606-NSUE.pdf (accessed 6 August 2008).

2.5 What will be the situation *without* the Draft PPS and the Programme? (the 'business-as-usual' option)

2.5.1 This section explores the situation *without* the Draft PPS and the Programme, ie no eco-towns or the 'business-as-usual' option.

Housing provision

2.5.2 The most recent household projections indicate that the number of households in England will increase by 223,300 per year until 2026⁶⁴ ⁶⁵. These projections are trend based and indicate what would happen if past demographic changes continue. The household projections are, in turn, driven by population projections and these take into account trends and assumptions for mortality, fertility and migration (of these, the level of assumed future migration has shown the most significant change⁶⁶). The household projections indicate that the proportion and number of one-person households will increase. In particular, the elderly living alone are contributing to an increasing need for housing for one-person households⁶⁷.

2.5.3 For the past few years the number of new homes in England has been on an upward trend. Total net additions in England increased from 130,000 per year at the turn of the century to 200,000 during 2006/07⁶⁸. However, the NHPAU considers that maintaining this level of supply will be very difficult during the next few years; the number of both starts and completions fell between 2007 and 2008⁶⁹. In July 2008, a total of 205,000 additional dwellings per year were reflected in emerging Regional Spatial Strategies (RSSs) in England– see Figure 5.

⁶⁴ Communities and Local Government (2008). *Statistical Release: Revised projections of households for the English regions to 2026* [online] available at: <http://www.communities.gov.uk/news/corporate/707319> (accessed 15 August 2008)

⁶⁵ The NHPAU points out that recent affordability constraints have prevented some households from forming, creating an element of pent-up demand. This includes sharing, concealed and overcrowded households and households in temporary accommodation.

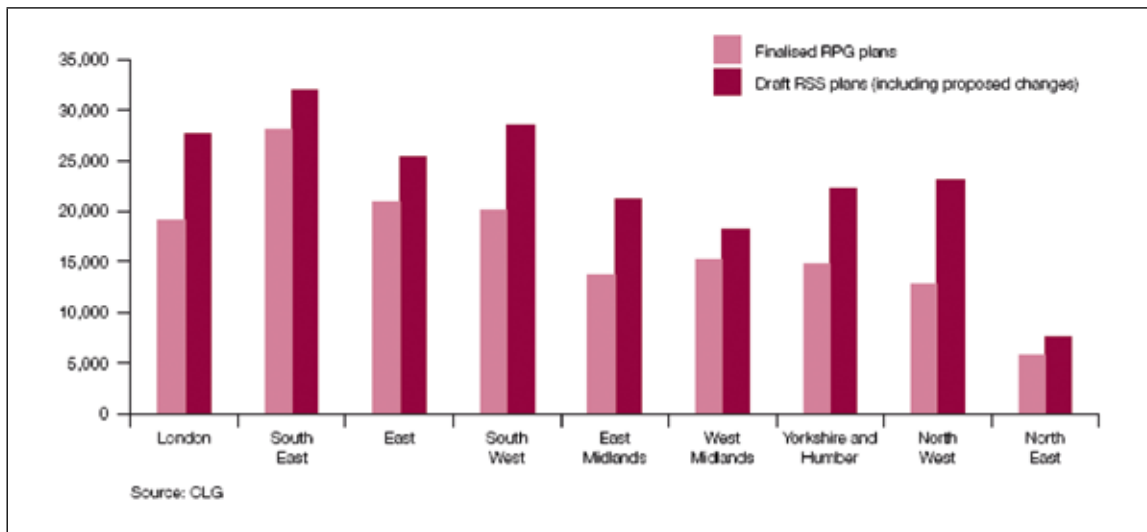
⁶⁶ National Housing and Planning Advice Unit (2008). *Meeting the housing requirements of an aspiring and growing nation: taking the medium and long-term view – Advice to the Minister about the housing supply range to be tested by Regional Planning Authorities* [online] available at: <http://www.communities.gov.uk/nhpau/keypublications/reports/meetinghousingrequirements/> (accessed 5 August 2008).

⁶⁷ *Ibid*

⁶⁸ National Housing and Planning Advice Unit (2008). *Affordability Still Matters* [online] available at <http://www.communities.gov.uk/nhpau/keypublications/reports/affordabilitystillmatters/> (accessed 5 August 2008).

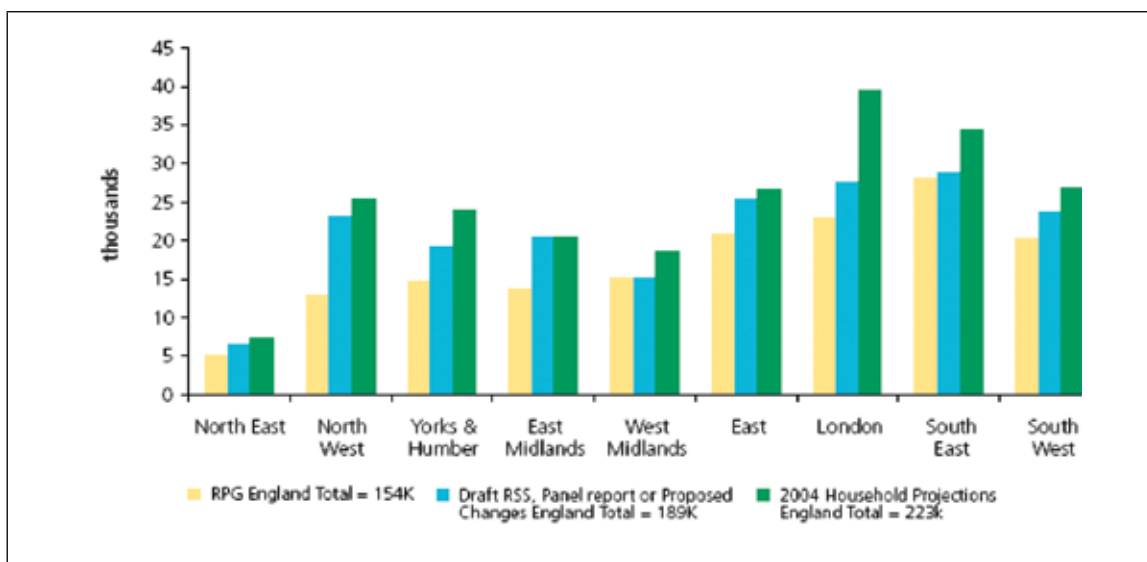
⁶⁹ National Housing and Planning Advice Unit (2008). *Affordability Still Matters* [online] available at <http://www.communities.gov.uk/nhpau/keypublications/reports/affordabilitystillmatters/> (accessed 5 August 2008).

Figure 5: Additional dwellings per year in RSSs



2.5.4 Generally speaking, the amount of new housing supplied through RSSs will not be sufficient to accommodate the forecast number of new households – see Figure 6⁷⁰. The Government has stated its intention to increase the supply of new homes through RSSs: the Housing Green Paper commits the Government to setting up reviews of regional plans to increase regional and local targets and states that RSSs will be revised, in whole or part, by 2011 at the latest to reflect plans for 240,000 homes a year by 2016⁷¹.

Figure 6: Housing supply levels in emerging RSSs vs. household projections

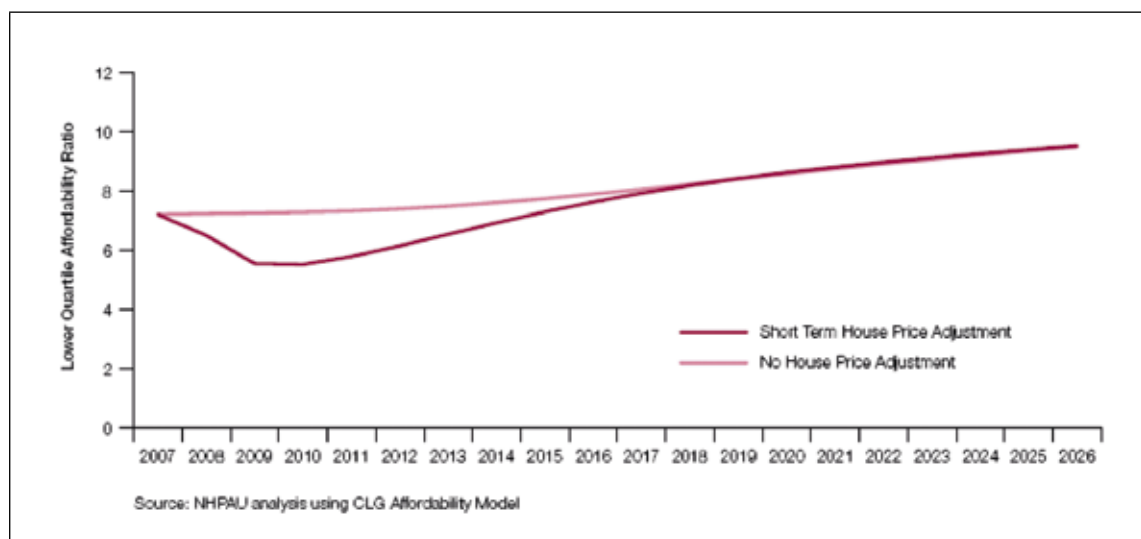


⁷⁰ The amount of housing in emerging RSSs and has since increased to 205,000 including increases in the South East (33,125) and South West (29,623)

⁷¹ Communities and Local Government (2007). *Homes for the future: more affordable, more sustainable* [online] available at <http://www.communities.gov.uk/publications/housing/homesforfuture> (accessed 5 August 2008).

2.5.5 In relation to affordability, independent forecasts suggest that further house price decreases are likely in the short-term^{72 73}. However, the NHPAU observes that while house prices have always fluctuated, over the last 30 years the long-term trend has been upwards (2.8 per cent in real house price growth per year)⁷⁴. They argue that while we may have reached the peak of the current house price cycle it is unlikely that prices will permanently stagnate⁷⁵. In their words: *“If we are at the top of the house price cycle and are undergoing a readjustment this is likely to be a relatively short-term deviation from the long-term trend”*⁷⁶. Modelling undertaken by the NHPAU indicates that a short-term fall in house prices will not improve affordability prospects in the long run since prices will be driven by underlying fundamentals in the market, such as income growth and demographic trends – see Figure 7⁷⁷.

Figure 7: Long-term affordability outcome if the housing market cools in the short-term⁷⁸



⁷² Council of Mortgage Lenders (2008). *Housing and mortgage market forecasts: 2008* [online] available at: <http://www.cml.org.uk/cml/publications/forecast> (accessed 15 August 2008).

⁷³ RICS Economics (2008). *2008 Housing Forecast* [online] available at: <http://www.rics.org/NR/rdonlyres/B57D1565-DC05-4F01-BFBD-CA9DD991D4FD/0/RICSHousingForecastMay2008.pdf> (accessed 15 August 2008).

⁷⁴ National Housing and Planning Advice Unit (2008). *Affordability Still Matters* [online] available at <http://www.communities.gov.uk/nhpau/keypublications/reports/affordabilitystillmatters/> (accessed 5 August 2008).

⁷⁵ *Ibid*

⁷⁶ *Ibid*

⁷⁷ *Ibid*

⁷⁸ National Housing and Planning Advice Unit (2008). *Affordability Still Matters* [online] available at <http://www.communities.gov.uk/nhpau/keypublications/reports/affordabilitystillmatters/> (accessed 5 August 2008).

- 2.5.6 In terms of locating new housing, emerging evidence suggests that the policy of urban concentration may not be sustainable in the longer-term as supplies of urban brownfield land begin to dwindle. The latest Regional Monitoring Report for the South East states that although *“Urban areas are currently the primary focus for commercial, leisure and housing development... the supply of land available, in particular derelict and vacant land within urban areas, appears to be decreasing. This decrease is inevitable given the emphasis on re-use of urban land over the last decade and the success of local authorities in ensuring the availability of these sites through the planning process”*⁷⁹. The report goes on to argue 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”*⁸⁰. The report also highlights the *“prospective tension between the high rate of completions on previously developed land (and at higher densities) and the type of homes being provided which are tending to be smaller and flats rather than houses. There are particular concerns about the provision of family housing”*⁸¹.
- 2.5.7 The Town and Country Planning Association (TCPA) notes that *“as concern over the disturbing economic effects of massive housing shortages has grown, interest in meeting need through urban extensions and new settlements has once more begun to take root”*⁸². Furthermore, they argue that this renewed interest has also, in part, been fuelled by unease over rising housing densities, a fall in building to meet ‘traditional’ family housing needs, and the increasing loss of open space within cities⁸³ (exemplified by concerns over ‘garden grab’).

Greener housing

- 2.5.8 Recent trends in the domestic sector have shown an increase in use of energy for lighting and appliances, whilst energy use for cooking and hot water has been declining⁸⁴. Research indicates that there is likely to be a continuation of these trends through, for example, the growth in the market for home entertainment equipment such as large-screen plasma

⁷⁹ South East England Regional Assembly (2007). *Regional Monitoring Report 2007* (Executive Summary) [online] available at: http://www.southeast-ra.gov.uk/success_monitoring_reports.html (accessed 15 August 2008).

⁸⁰ *Ibid*

⁸¹ South East England Regional Assembly (2007). *Regional Monitoring Report 2007* (Executive Summary) [online] available at: http://www.southeast-ra.gov.uk/success_monitoring_reports.html (accessed 15 August 2008).

⁸² Town and Country Planning Association (2007). *Best Practice in Urban Extensions and New Settlements* [online] available at: http://www.tcpa.org.uk/downloads/20070606-NSUE.pdf?bcsi_scan_F6892CABA15785B4=0&bcsi_scan_filename=20070606-NSUE.pdf (accessed 6 August 2008).

⁸³ Town and Country Planning Association (2007). *Best Practice in Urban Extensions and New Settlements* [online] available at: http://www.tcpa.org.uk/downloads/20070606-NSUE.pdf?bcsi_scan_F6892CABA15785B4=0&bcsi_scan_filename=20070606-NSUE.pdf (accessed 6 August 2008).

⁸⁴ Communities and Local Government (2007). *Building A Greener Future* [online] available at <http://www.communities.gov.uk/publications/planningandbuilding/building-a-greener> (accessed 5 August 2008).

televisions and home computers; moreover, climate change itself may lead to further developments, for example, a growth in demand for home air conditioning⁸⁵. The Government has put in place several measures to secure reductions in domestic emissions through promoting energy efficiency and conservation. These include action to promote achievement of greater domestic energy efficiency by electricity and gas suppliers through the Energy Efficiency Commitment (EEC), and its successor, the Carbon Emissions Reduction Target (CERT) and action via the Warm Front Programme and Decent Homes Standard to tackle fuel poverty and energy wastage through improved home insulation and heating⁸⁶. All in all, household emissions are projected to fall from around 40 million tonnes of carbon (MtC) today to around 36 MtC in 2010, and 30 MtC by 2020⁸⁷.

2.5.9 Most significantly, the energy efficiency Building Regulations (Part L) are set to be progressively tightened in order to reach zero carbon development in all new housing in England and Wales by 2016. Zero carbon is defined as meaning that, over a year, the net carbon emissions from all energy use in the home would be zero.

2.5.10 Pressures on water resources are set to increase in the future and the Government acknowledges that population growth and changes in household size mean more houses are needed in some areas where abstraction is not currently sustainable (and that climate change will severely worsen the situation)⁸⁸. In relation to water efficiency, *Future Water*, the Government's water strategy for England, argues that per capita consumption of water can be reduced, through cost effective measures, to an average of 130 litres per person per day (l/p/d) by 2030 or possibly even 120 l/p/d depending on new technological developments and innovation⁸⁹. The Government has also indicated that the Building Regulations (Part G) will be amended to include a requirement for a minimum standard of water efficiency in new homes.

2.5.11 Although statutory measures are being taken to increase the energy efficiency of homes and reduce domestic water consumption, whether or not progress is made in relation to the wider aspects of greener housing will largely depend on the rigour of planning policy and its enforcement and the spread and adoption of best practice. Government policy on biodiversity, for example, requires that planning policies should promote opportunities

⁸⁵ Communities and Local Government (2007). *Building A Greener Future* [online] available at <http://www.communities.gov.uk/publications/planningandbuilding/building-a-greener> (accessed 5 August 2008).

⁸⁶ *Ibid*

⁸⁷ Department for the Environment, Food and Rural Affairs (2007). *Consultation on the Review of the Home Energy Conservation Act 1995 (HECA)* [online] available at: <http://www.defra.gov.uk/corporate/consult/heca/consultation.pdf> (accessed 15 August 2008).

⁸⁸ Department for Environment, Food and Rural Affairs (2008). *Future Water: The Government's water strategy for England* [online] available at: <http://www.defra.gov.uk/environment/water/strategy/index.htm> (accessed 20 September 2008).

⁸⁹ *Ibid*

for the incorporation of beneficial biodiversity features within the design of development⁹⁰; however, whether or not this becomes commonplace will depend on the stringency of policies in Local Development Frameworks and the degree to which they are effectively implemented.

Summary – the situation without eco-towns

- The number of households in England will increase by 223,300 per year until 2026
- Only 205,000 additional new homes per year are provided for in Regional Spatial Strategies
- There will not be enough housing to accommodate the forecast number of new households
- Regional Spatial Strategies should provide for 240,000 new homes per year by 2016
- A short-term fall in house prices will not improve affordability prospects in the long run
- Concentrating new housing in urban areas will become more difficult as urban brownfield land supplies dwindle
- Energy use in the home for lighting and appliances may continue to increase
- Household carbon emissions are projected to fall by a quarter by 2020
- New homes will be greener: all housing in England and Wales will be zero carbon by 2016 and water efficiency should improve

2.6 What will be the situation *with* the Draft PPS?

2.6.1 This section explores the situation *with* the Draft PPS; the next section considers the implications of the Eco-towns Programme, ie the shortlisted locations.

Housing provision

2.6.2 The Draft Eco-towns PPS recognises that the vast majority of housing growth will continue to be in towns and cities, with a focus on brownfield land. However, the Draft PPS reiterates and underlines the advice in PPS3 that where need and demand are high, it will be necessary to consider options including new settlements⁹¹.

⁹⁰ Office of the Deputy Prime Minister (2005). *Planning Policy Statement 9: Biodiversity and Geological Conservation* [online] available at: <http://www.communities.gov.uk/publications/planningandbuilding/pps9> (accessed 20 September 2008).

⁹¹ Communities and Local Government (2006). *Planning Policy Statement 3: Housing* [online] available at: <http://www.communities.gov.uk/publications/planningandbuilding/pps3housing> (accessed 4 August 2008).

- 2.6.3 New settlements may certainly play an important role in future housing provision, particularly in areas where need and demand are high and the scope for development in urban areas is diminishing. The TCPA argues that *“Thanks to local prosperity, and often thanks to a shortage of recyclable land and buildings, pressures for new homes and associated uses, including employment, has led many towns to reach their ‘stop’”,* ie the point where a town reaches its limit (e.g. an impermeable physical boundary or a sense that that the latest town expansion is so removed from the heart of the place that it might as well not be part of the place at all)⁹². This is most likely to be the case in regions such as the South West, South East and the East of England where need and demand is high, the settlement pattern is generally one of medium-sized towns and development is often highly constrained by designations such as Green Belt and Area of Outstanding Natural Beauty.
- 2.6.4 For this reason, new free-standing settlements are certainly likely to be part of the housing solution. The TCPA observes that *“As a response to the housing shortage brought about by, among other things, recent under-supply, changing demographics, people living longer, and more people living alone, urban extensions and stand-alone settlements are increasingly being considered as key development options by forward-thinking local authorities and developers”*⁹³. In the East of England, 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”*⁹⁴.
- 2.6.5 In addition to accommodating new housing, new settlements arguably offer the opportunity to provide a housing mix which might be more difficult to achieve in existing urban areas, particularly the provision of family homes with gardens. More broadly, the Draft Eco-towns PPS argues that new settlements provide the opportunity to plan and deliver a locally appropriate mix of housing tenure to meet the needs of all income groups and household size.
- 2.6.6 Although new settlements may become a headline part of the housing solution they are certainly not the sole answer. For example, taken together

⁹² Town and Country Planning Association (2007). *Best Practice in Urban Extensions and New Settlements* [online] available at: http://www.tcpa.org.uk/downloads/20070606-NSUE.pdf?bcsi_scan_F6892CABA15785B4=0&bcsi_scan_filename=20070606-NSUE.pdf (accessed 6 August 2008).

⁹³ Town and Country Planning Association (2007). *Best Practice in Urban Extensions and New Settlements* [online] available at: http://www.tcpa.org.uk/downloads/20070606-NSUE.pdf?bcsi_scan_F6892CABA15785B4=0&bcsi_scan_filename=20070606-NSUE.pdf (accessed 6 August 2008).

⁹⁴ East of England Regional Assembly (2008). *Review of the East of England Plan: Draft Project Plan* [online] available at: <http://www.eera.gov.uk/category.asp?cat=736> (accessed 15 August 2008).

the shortlisted eco-town locations are likely to provide only a very small amount of the 3 million homes envisaged by 2020 should they proceed (~3 per cent). It is important to recognise that free-standing settlements can be proposed at anytime and are suggested as an option in PPS3. What distinguishes an eco-town from a free-standing settlement is the emphasis on sustainable living and the aspiration to minimise environmental impact.

Greener housing

- 2.6.7 The consultation on the Draft Eco-towns PPS recognises that new settlements and zero carbon or environmentally sensitive developments are not new ideas but argues that *“bringing these two concepts together offers the potential to help meet the challenge of climate change and housing growth”*⁹⁵. Communities and Local Government goes on to argue that eco-towns *“should demonstrate best practice in terms of sustainable development”*⁹⁶. The eco-concept is encapsulated in a series of criteria which eco-towns must satisfy⁹⁷. Table 3 sets out the proposed eco-towns standards together with an analysis of the extent to which they represent an improvement on business-as-usual.

⁹⁵ Communities and Local Government (2008). *Draft Planning Policy Statement: Eco-towns – Consultation Document*

⁹⁶ *Ibid*

⁹⁷ It is important to note that all eco-towns must comply with existing national planning policies, except where the PPS sets a standard which is either more specific or more demanding than that set out in national policy

Table 3: Eco-towns standards

Topic	Standard	Does this represent an improvement on business-as-usual?
<p>Zero carbon in Eco-towns</p>	<p>The definition of Zero Carbon in eco-towns is that over a year the net carbon dioxide emissions from all energy use within the buildings on the development are zero or below⁹⁸. Planning Applications should demonstrate how this will be achieved.</p> <p>The health and social care needs of residents, and the resulting energy demand, should be taken into account when demonstrating how this standard will be met.</p> <p>This standard will take effect in accordance with a phased programme to be submitted with the planning application. It excludes embodied carbon¹⁰⁰ and emissions from transport but includes all buildings – not just houses but also commercial and public sector buildings which are built as part of the eco-town development. The calculation of net emissions will take account of:</p> <ul style="list-style-type: none"> a) emissions associated with the use of locally produced energy, b) emissions associated with production of energy imported from centralised energy networks, taking account of the carbon intensity of those imports as set out in the Government’s Standard Assessment Procedure; and c) emissions displaced by exports of locally produced energy to centralised energy networks. Where that energy is produced from a plant (1) whose primary purpose is to support the needs of the eco-town and (2) has a production capacity reasonably related to the overall energy requirement of the eco-town. <p>This standard attempts to ensure that energy emissions related to the built environment in eco-towns are zero or below. Standards applicable to individual homes are set out in paragraph 4.9 (see below).</p>	<p>✓</p> <p>The Building Regulations set the minimum requirements for the energy performance of new buildings. The standards within these would not currently meet even the lowest Code for Sustainable Homes rating for energy (>10 per cent improvement on Building Regulations = 1 star).</p> <p>However, the Government has proposed a timetable for revising Part L of the Building Regulations in order to reach zero carbon development in all new housing in England and Wales by 2016 (Code for Sustainable Homes level 6). Zero carbon new homes within eco-towns built before 2016 would therefore represent a clear improvement on business-as-usual. In addition, the standard refers to ‘all buildings’ and since new non-domestic buildings are not envisaged to be zero carbon until 2019, this would also represent a significant improvement on business-as-usual.</p>

⁹⁸ This definition of zero carbon applies solely in the context of eco-towns, and applies to the whole development rather than to individual buildings.

⁹⁹ ie carbon emissions resulting from the construction process.

Table 3: Eco-towns standards (*continued*)

Topic	Standard	Does this represent an improvement on business-as-usual?
Climate Change Adaptation	<p>Eco-towns should be sustainable communities that are resilient to and appropriate for the climate change now accepted as inevitable. They should be planned to minimise future vulnerability in a changing climate, and with both mitigation and adaptation in mind¹⁰¹.</p> <p>Developments should be designed to take account of the climate they are likely to experience, using, for example, the most recent climate change scenarios available from the UK Climate Change Impacts Programme. Eco-towns should deliver a high quality local environment and meet the standards on water, flooding, green infrastructure and biodiversity set out in this PPS, taking into account a changing climate for these, as well incorporating wider best practice on tackling overheating and impacts of a changing climate for the natural and built environment.</p>	<p>✓</p> <p>PPS1: Planning and Climate Change emphasises the need to adapt to the consequences of climate change but is not prescriptive. We are unaware of any national standards on climate change adaptation and, as such, the standard will by definition represent an improvement on business-as-usual. Note that regional or local adaptation advice and standards may increasingly emerge; for example, a draft London climate change adaptation strategy has been prepared¹⁰².</p>

¹⁰⁰ In line with Planning Policy Statement: Planning and Climate Change (supplement to PPS 1) and supporting practice guidance.

¹⁰¹ Mayor of London (2008). *The London climate change adaptation strategy: Draft report* [online] available at: <http://www.london.gov.uk/mayor/publications/2008/docs/climate-change-adapt-strat.pdf> (accessed 8 October 2008).

Table 3: Eco-towns standards (continued)

Topic	Standard	Does this represent an improvement on business-as-usual?
Homes	<p>As well as being zero carbon as part of the whole built environment, homes in eco-towns should:</p> <ul style="list-style-type: none"> a) achieve Building for Life Silver Standard and Level 4 of the Code for Sustainable Homes¹⁰³ at a minimum (unless higher standards are set elsewhere in this Planning Policy Statement); b) meet lifetime homes standards and English Partnerships space standards; c) have real time energy monitoring systems; real time public transport information and high speed broadband access; and d) provide for at least 30 per cent affordable housing (which includes social-rented and intermediate housing)¹⁰⁴. e) demonstrate high levels of energy efficiency in the fabric of the building having regard to standards to be incorporated into Building Regulations between now and 2016 (consultation forthcoming later in 2008); and f) achieve, through a combination of energy efficiency, on-site low and zero carbon energy generation and any heat supplied from low and zero carbon heat systems directly connected to the development, carbon reductions (from space heating, hot water and fixed lighting) of at least 70 per cent relative to current Building Regulations (Part L 2006). 	<p>✓</p> <p>The requirement that all new homes within eco-towns should achieve Level 4 of the Code for Sustainable Homes represents a clear improvement on business-as-usual since the Code is voluntary and spans a wide range of issues (energy and CO₂ emissions; water; materials; surface water run-off; waste; pollution; health and wellbeing; management; and ecology).</p> <p>The Building for Life standard is included in the Government's updated annual monitoring report guidance for local and regional planning authorities. Each housing scheme should be assessed against the 20 criteria, which are jointly promoted by CABE and the Home Builders Federation. Silver schemes fulfil 70 per cent of the criteria. However, achieving a Silver Standard is not mandatory and so this represents a clear improvement on business-as-usual.</p> <p>The Lifetime Homes Standard consists of 16 criteria and aims to promote accessible and adaptable accommodation. Many development plans already require the Lifetime Homes Standard in new developments (e.g. the London Plan). All public sector funded housing in England will be built to the Lifetime Homes Standard from 2011 (it is a requirement now in Wales and Northern Ireland), with a target of 2013 for all private sector dwellings. With respect to the Lifetime Homes Standard, the Draft PPS does not therefore represent a clear improvement on business-as-usual.</p>

¹⁰² Code Level 4 contains within it standards to be achieved for: household waste recycling, construction waste, composting facilities, water efficiency measures, surface water management, use of materials, energy and CO₂, pollution, health and well-being, ecology and on-going management of the development.

¹⁰³ See PPS 3 for definition and policy approach.

Table 3: Eco-towns standards (*continued*)

Topic	Standard	Does this represent an improvement on business-as-usual?
Homes (<i>continued</i>)	The intent of the energy efficiency and on-site carbon reduction standards is to ensure that, without being too prescriptive as to the means employed to achieve the overall zero carbon standard, reasonable opportunities for energy efficiency and on-site carbon mitigation (including directly connected heat systems) are utilised. We are seeking your views on whether this PPS should be more prescriptive than set out in (e) above in relation to energy efficiency, and also whether 70 per cent is an appropriate level of carbon mitigation through on-site means?	<p>PPS3: Housing advises that RSSs should include an affordable housing target for the region and each housing market area. Local Development Frameworks should also include an overall (ie plan-wide) target for the amount of affordable housing to be provided. Although the Draft PPS requires the provision of at least 30 per cent affordable housing, the target for the authority area in which the eco-town is situated could be higher (on the basis of need), hence our recommendation in Section 3.9).</p> <p>It should be recognised that every effort should be made to ensure that new homes are truly zero carbon since offices, retail and hospitals for example have a much higher energy demand than dwellings (per unit area); new homes represent the easiest win.</p>
Employment	It is important to ensure that eco-towns are genuine mixed-use communities and that unsustainable commuter trips are kept to a minimum. An economic strategy should be produced to accompany planning applications for eco-towns that demonstrates how access to work will be achieved. The strategy should also set out facilities to support job creation in the town and as a minimum there should be access to one employment opportunity per new dwelling that is easily reached by walking, cycling and/or public transport.	<p>✓</p> <p>In terms of policy, the consultation on a new Planning Policy Statement 4: Planning for Sustainable Economic Development¹⁰⁵ emphasises that regional planning bodies and local planning authorities should plan to encourage economic growth. The consultation includes a series of objectives including identifying a good range of sites for economic development and mixed-use development; providing a good supply of land and buildings which offer a range of opportunities for creating new jobs in large and small businesses as well as start-up firms and which is responsive to changing needs and demands; and shaping travel demand by promoting sustainable travel choices wherever possible.</p> <p>Having said this, the requirement that, as a minimum there should be access to one employment opportunity per new dwelling that is easily reached by walking, cycling and/or public transport, represents a clear improvement on business-as-usual in terms of policy.</p>

¹⁰⁴ Communities and Local Government (2008). Consultation Paper on a new Planning Policy Statement 4: Planning for Sustainable Economic Development [online] available at: <http://www.communities.gov.uk/documents/planningandbuilding/pdf/614685.pdf> (accessed 9 October 2008).

Table 3: Eco-towns standards (*continued*)

Topic	Standard	Does this represent an improvement on business-as-usual?
Transport	<p>Travel in eco-towns should support people's desire for mobility whilst achieving the goal of low carbon living. The town should be designed so that access to it and through it gives priority to options such as walking, cycling and public transport, and thereby reducing residents' reliance on private cars. To achieve this, homes should be within ten minutes' walk of (a) frequent public transport and (b) neighbourhood services¹⁰⁶. The provision of services within the eco-town may be co-located to reduce the need for individuals to travel by private car.</p> <p>Planning applications should include travel plans which demonstrate:</p> <ol style="list-style-type: none"> how the town's design will enable at least 50 per cent of trips originating in eco-towns to be made by non-car means; good design principles, drawing from Manual for Streets, CABI's Building for Life Code, and community travel planning principles; how transport choice messages and infrastructure will be provided from 'day 1' of residential occupation; and how the carbon impact of transport in the eco-town will be monitored, as part of embedding a long term low-carbon approach to travel within plans for community governance. 	<p>✓</p> <p>Planning Policy Statement 1: Delivering Sustainable Development¹⁰⁷ states that regional planning bodies and local planning authorities should ensure that development plans contribute to global sustainability by addressing the causes and potential impacts of climate change – through policies which, amongst other things, reduce emissions, for example, by encouraging patterns of development which reduce the need to travel by private car.</p> <p>Planning Policy Guidance 13: Transport¹⁰⁸ includes objectives to:</p> <ul style="list-style-type: none"> • promote more sustainable transport choices for both people and for moving freight; • promote accessibility to jobs, shopping, leisure facilities and services by public transport, walking and cycling, and • reduce the need to travel, especially by car. <p>PPG13 requires that planning applications with significant transport implications should be accompanied by a travel plan.</p> <p>Planning Policy Statement 6: Planning for Town Centres¹⁰⁹ includes an objective to improve accessibility, ensuring that existing or new development is, or will be, accessible and well-served by a choice of means of transport.</p>

¹⁰⁵ Specific proposals for the location of health and social care services should reflect the particular local circumstances and be made following discussions with the Primary Care Trust.

¹⁰⁶ Office of the Deputy Prime Minister (2005). *Planning Policy Statement 1: Delivering Sustainable Development* [online] available at: <http://www.communities.gov.uk/publications/planningandbuilding/planningpolicystatement1> (accessed 9 October 2008).

¹⁰⁷ Department for Environment, Transport and the Regions (2001). *Planning Policy Guidance 13: Transport* [online] available at: <http://www.communities.gov.uk/publications/planningandbuilding/ppg13> (accessed 9 October 2008).

¹⁰⁸ Office of the Deputy Prime Minister (2005). *Planning Policy Statement 6: Planning for Town Centres* [online] available at: <http://www.communities.gov.uk/publications/planningandbuilding/pps6> (accessed 9 October 2008).

Table 3: Eco-towns standards (continued)

Topic	Standard	Does this represent an improvement on business-as-usual?
Transport (continued)	<p>Where an eco-town is close to an existing settlement, planning applications should also demonstrate:</p> <ul style="list-style-type: none"> a) options for ensuring that key connections around the eco-town do not become congested as a result of the development, for example by extending some aspects of the travel plan beyond the immediate boundaries of the town; and b) significantly more ambitious targets for modal share than the 50 per cent mentioned above. <p>Where eco-town plans intend to incorporate electric car schemes to help achieve a sustainable transport system, planning applications should demonstrate that:</p> <ul style="list-style-type: none"> a) there will be sufficient energy headroom to meet the higher demand for electricity; and b) schemes will not add so many additional private vehicles to the local road network that these will cause congestion. <p>Eco-towns should be designed in a way that supports children walking or cycling to school safely and easily. There should be a maximum walking distance of 800m¹⁰⁹ from homes to the nearest school for children aged under 11¹¹¹, except where this is not a viable option due to natural water features or other physical landscape restrictions.</p>	<p>Although Government guidance emphasises the need to promote more sustainable travel through the provision of choice and good design, the targets that homes should be within ten minutes' walk of frequent public transport and neighbourhood services; that there should be a maximum walking distance of 800m from homes to the nearest school for children aged under 11; and that it must be demonstrated how the town's design will enable at least 50 per cent of trips originating in eco-towns to be made by non-car means represent a clear improvement on business-as-usual. Furthermore, the explicit requirement that the latter should be exceeded where an eco-town is close to an existing settlement (which will doubtless be the case for most) also represents a clear improvement on business-as-usual.</p>

¹⁰⁹ The distance should be measured by the shortest route along which a child may walk in reasonable safety.

¹¹⁰ This is a planning standard for eco-towns. It does not override existing legislation and guidance on school admissions, school organisation or home to school travel and transport.

Table 3: Eco-towns standards (*continued*)

Topic	Standard	Does this represent an improvement on business-as-usual?
Local Services	Building sustainable communities is about providing facilities which contribute to the well-being, enjoyment and health of people. Planning applications should include a good level of provision of services within the eco-town that is proportionate to the size of the development. This should include leisure, health and social care, education, retail, arts and culture, library services, sport and play facilities and community and voluntary sector facilities.	<p>~</p> <p>Planning Policy Statement 1: Delivering Sustainable Development states that development plans should ensure that developments incorporate an appropriate mix of uses including green and other public space and support local services and transport infrastructure. Planning should provide improved access to jobs, health, education shops, leisure and community facilities.</p> <p>Policy Planning Statement 3: Housing states that the planning system should deliver “developments in suitable locations, which offer a good range of community facilities and with good access to jobs, key services and infrastructure”.</p> <p>In this context, it is difficult to assess what improvements, over the business-as-usual, the Draft PPS offers other than proposing a “good level” of services which is not prescribed in existing documents.</p>

Table 3: Eco-towns standards (continued)

Topic	Standard	Does this represent an improvement on business-as-usual?
Green Infrastructure	<p>Forty per cent of the eco-town's total area should be allocated to green space, of which at least half should be public and consist of a network of well managed, high quality green/open spaces which are linked to the wider countryside. Planning applications should demonstrate a range of types of green space, for example community forests, wetland areas and town squares. The space should be multifunctional, eg accessible for play and recreation, walking or cycling safely, and support wildlife, urban cooling and flood management.</p> <p>Particular attention should be given to land to allow the local production of food from community, allotment and/or commercial gardens.</p>	<p>✓</p> <p>Planning Policy Guidance 17: Planning for Open space, Sport and Recreation¹¹² uses the term 'open space' to mean all open space of public value, including not just land, but also areas of water which offer opportunities sport, recreation and visual amenity. It highlights the following areas "that may be of public value" – natural and semi-natural urban greenspaces, including grasslands, wetlands, scrub, woodlands, urban forestry, open and running water as well as derelict land and open rock areas. Value may also be attached to, inter alia, green corridors, outdoor sports facilities and amenity space, including those within housing areas, community gardens, civic spaces, allotments and accessible countryside in urban fringe areas. PPG17, however, places the responsibility on the local authority to implement the standards of provision.</p> <p>Natural England's Accessible Natural Greenspace Standard (ANGSt) require the provision of a natural greenspace (as opposed to a more formal ecologically-sterile park) of at least 2 hectares in size, no more than 300 metres from the houses it is intended to serve, and new statutory Local Nature Reserves at a minimum level of one hectare per thousand population.</p> <p>The Draft PPS raises the profile of green infrastructure as multi-functional open space which performs ecosystem functions as well as providing for amenity and public enjoyment. The explicit target of 40 per cent of the town's total area being allocated to green infrastructure, represents a clear improvement on business-as-usual.</p>

¹¹¹ Office of the Deputy Prime Minister (2002). *Planning Policy Guidance 17: Planning for Open space, Sport and Recreation* [online] available at: <http://www.communities.gov.uk/publications/planningandbuilding/planningpolicyguidance17> (accessed 9 October 2008).

Table 3: Eco-towns standards (continued)

Topic	Standard	Does this represent an improvement on business-as-usual?
Biodiversity	<p>Planning permission may not be granted for eco town proposals which are likely to:</p> <ul style="list-style-type: none"> a) have a significant adverse effect on internationally designated nature conservation sites or Sites of Special Scientific Interest; or b) result in a net loss of biodiversity from the local area. <p>A strategy for conserving and enhancing local biodiversity should be produced to accompany planning applications for eco-towns. This should include proposals for the management of local ecosystems, including, where appropriate, the restoration of degraded habitats or the creation of replacement habitats. It should set out the actions including appropriate mitigation and/or compensation measures, required to minimise adverse effects on individual species and habitats of principal importance and to enhance local biodiversity overall. Developers should seek the advice of Natural England and other relevant statutory advisers when developing their strategies and decision making authorities should also consult those bodies as to the adequacy of such strategies.</p>	<p>✓</p> <p>Planning Policy Statement 9: Biodiversity and Geological Conservation¹¹³ recognises that biodiversity can contribute to urban and rural enhancement as part of green spaces and developments, and can positively contribute to quality of life. As well as promoting the protection and enhancement of international sites, SSSIs, regional and local sites, ancient woodland, previously developed land and biodiversity within developments, PPS9 also promotes the protection of habitat/ecological networks and biodiversity in the wider countryside. Local authorities are tasked with maintaining networks by avoiding or repairing the fragmentation and isolation of natural habitats. PPS9 promotes a strategic approach recognising the contributions that sites, areas and features, both individually and in combination make to conserving biodiversity. PPS 9 explicitly requires that development plan policies should promote opportunities for the incorporation of beneficial biodiversity within the design of development.</p> <p>The Biodiversity Strategy for England¹¹⁴ and includes the broad aim that planning, construction, development and regeneration should have minimal impacts on biodiversity and enhance it wherever possible.</p>

¹¹² Office of the Deputy Prime Minister (2005). *Planning Policy Statement 9: Biodiversity and Geological Conservation* [online] available at: <http://www.communities.gov.uk/publications/planningandbuilding/pps9> (accessed 9 October 2008).

¹¹³ Department for Environment, Food and Rural Affairs (2002). *Working with the Grain of nature: A Biodiversity Strategy for England* [online] available at: <http://www.defra.gov.uk/wildlife-countryside/biodiversity/biostrat/index.htm> (accessed 9 October 2008).

Table 3: Eco-towns standards (continued)

Topic	Standard	Does this represent an improvement on business-as-usual?
Biodiversity (continued)		<p>Conserving Biodiversity – The UK Approach¹¹⁵ states that a key underlying principle for the conservation of biodiversity is the ecosystem approach which includes ensuring that the value of ecosystem services is fully reflected in decision-making; environmental limits are respected, taking into account ecosystem functioning; and decisions are taken at the appropriate spatial scale recognising the cumulative impacts of decisions.</p> <p>The Draft PPS’s emphasis on the management of local ecosystems including restoration and creation in order to enhance local biodiversity represents an improvement on business-as-usual. Explicit reference to consultation with statutory advisors should also ensure improved biodiversity value to proposals.</p>

¹¹⁴ Department for Environment, Food and Rural Affairs on behalf of the UK Biodiversity Partnership (2007). *Conserving Biodiversity – The UK Approach* [online] available at: <http://www.defra.gov.uk/wildlife-countryside/pdfs/biodiversity/conbiouk-oct2007.pdf> (accessed 9 October 2008).

Table 3: Eco-towns standards (*continued*)

Topic	Standard	Does this represent an improvement on business-as-usual?
Water	<p>Eco-towns should be ambitious in terms of water efficiency across the whole development, particularly in areas of serious water stress¹¹⁶, and should contribute, where existing water quality leaves scope for further improvement, towards improving water quality in their localities.</p> <p>Planning applications for all eco-towns should be accompanied by a water cycle strategy that provides a plan for the necessary water services infrastructure improvements. The water cycle strategy should have been developed in partnership with interested parties, including the local planning authority, the Environment Agency, and the relevant water and sewerage companies through a water cycle study. The strategy should:</p> <ul style="list-style-type: none"> a) assess the impact that the proposed development will have on water demand within the framework of the water companies' water resource management plans and set out the proposed measures which will limit additional water demand from both new housing and new non-domestic buildings; b) demonstrate that the development will not result in a deterioration in the status¹¹⁷ of any surface waters or ground-waters affected by the eco-town; and c) set out proposed measures for improving water quality and avoiding surface water flooding. 	<p>✓</p> <p><i>Future Water</i>, the Government's water strategy for England, argues that per capita consumption of water can be reduced, through cost effective measures, to an average of 130 litres per person per day (l/p/d) by 2030 or possibly even 120 l/p/d depending on new technological developments and innovation¹¹⁸. The Government has also indicated that the Building Regulations (Part G) will be amended to include a requirement for a minimum standard of water efficiency in new homes.</p> <p>The Code for Sustainable Homes measures the sustainability of a new home against nine categories of sustainable design and uses a 1 to 6 star rating system to communicate the overall sustainability performance of a new home. Minimum standards for water use are set at each level. New homes in eco-towns should reach Level 4 of the Code for Sustainable Homes at a minimum and this equates to a maximum indoor water consumption of 105 litres per person per day (in 2005/06, average water consumption in England and Wales was around 150 litres per person per day)¹¹⁹. This obviously represents a clear improvement on business-as-usual.</p>

¹¹⁵ As designated by the Water Industry (Prescribed Conditions) Amendment Regulations 2007 (S.I. 2007/2457) – map to illustrate extent of water stress can be obtained from the Environment Agency.

¹¹⁶ Information on status can be obtained from the Environment Agency – in the case of water bodies, this information will be reported in the River Basin Management Plan.

¹¹⁷ Department for Environment, Food and Rural Affairs (2008). *Future Water: The Government's water strategy for England* [online] available at: <http://www.defra.gov.uk/environment/water/strategy/index.htm> (accessed 20 September 2008).

¹¹⁸ Communities and Local Government (2008). *Code for Sustainable Homes: Technical guide* [online] available at: <http://www.communities.gov.uk/publications/planningandbuilding/codeguide> (accessed 9 October 2008).

Table 3: Eco-towns standards (*continued*)

Topic	Standard	Does this represent an improvement on business-as-usual?
Water (<i>continued</i>)	<p>Eco-towns should:</p> <ul style="list-style-type: none"> a) incorporate the measures in the water cycle strategy for improving water quality and managing surface water to prevent surface water flooding; and b) incorporate sustainable drainage systems (SUDS) and, except where this is not feasible, as identified within a relevant Surface Water Management Plan¹²⁰, avoid connection of surface water run-off into sewers. <p>Planning applications for all eco-towns should include a strategy for the long term maintenance, management and adoption of the SUDS.</p> <p>Eco-towns in areas of serious water stress should aspire to water neutrality, ie achieving development without increasing overall water use across a wider area¹²¹. In particular, the water cycle strategy should set out how:</p> <ul style="list-style-type: none"> a) the development would be designed and delivered to limit the impact of the new development on water use, and any plans for additional measures eg within the existing building stock of the wider designated area, that would contribute towards water neutrality; b) new homes will be equipped to meet the water consumption requirement of Level 5 of the Code for Sustainable Homes; and c) new non-domestic buildings will be equipped to meet similar high standards of water efficiency with respect to their domestic water use. 	<p>Water Cycle Strategies – which provide a plan and programme for implementing water services infrastructure – are not formally required but are increasingly undertaken by local planning authorities as an input to Local Development Frameworks. They are recommended in the East of England Regional Spatial Strategy. Having said this, the formal requirement to undertake a WCS – and respond to its recommendations – represents an improvement on business-as-usual.</p> <p>In terms of water quality, the Water Framework Directive requires Member States to reach good chemical and ecological status in inland and coastal waters by 2015. The requirement to set out measures for <i>improving</i> water quality appears to represent a clear improvement on business-as-usual.</p> <p>Planning Policy Statement 25: Development and Flood Risk¹²² that regional planning bodies and local authorities should reduce flood risk to and from new development through location, layout and design, incorporating sustainable drainage systems (SUDS). It also advises that it is essential that the ownership and responsibility for maintenance of every sustainable drainage element is clear. As such, the requirement in the eco-towns standard does not go beyond business-as-usual.</p>

¹¹⁹ All eco-towns must be covered by a Strategic Flood Risk Assessment (SFRA), as defined in PPS25, Development and Flood Risk, and the PPS25 Practice Guide. A Surface Water Management Plan for the eco-town should form part of the SFRA.

¹²⁰ Wider area to be determined by water cycle study normally by reference to the water company water resource zone in which the development is to be located

¹²¹ Communities and Local Government (2006). *Planning Policy Statement 25: Development and Flood Risk* [online] available at: <http://www.communities.gov.uk/publications/planningandbuilding/pps25floodrisk> (accessed 9 October 2008).

Table 3: Eco-towns standards (continued)

Topic	Standard	Does this represent an improvement on business-as-usual?
Water (continued)		The requirement to aspire to 'water neutrality' in areas of water stress (e.g. the East of England) represents a clear improvement on business-as-usual and would represent a step change in sustainable design. Level 5 of the Code for Sustainable Homes equates to a maximum indoor water consumption of 80 litres per person per day (in 2005/06, average water consumption in England and Wales was around 150 litres per person per day) ¹²³ . This obviously represents a clear improvement on business-as-usual. In addition, the requirement that new non-domestic buildings are equipped to meet similar high standards of water efficiency with respect to their domestic water use is also a clear improvement on business-as-usual.

¹²² Communities and Local Government (2008). *Code for Sustainable Homes: Technical guide* [online] available at: <http://www.communities.gov.uk/publications/planningandbuilding/codeguide> (accessed 9 October 2008).

Table 3: Eco-towns standards (continued)

Topic	Standard	Does this represent an improvement on business-as-usual?
Flood Risk Management	<p>The location, layout and construction of eco-towns should reduce and avoid flood risk wherever practicable. Eco-towns should not increase the risk of flooding elsewhere and use opportunities to address and reduce existing flooding problems.</p> <p>There is a strong expectation that all of the built-up areas of an eco-town (including housing, other public buildings and infrastructure) will be fully within Flood Zone 1 – the lowest risk¹²⁴. Flood Zone 2 (medium risk) should, as far as possible, be used for open spaces and informal recreational areas that can serve as multi-functional spaces, for example, those used for flood storage. There should be no built-up development in Flood Zone 3, with the exception of water-compatible development and, where absolutely necessary, essential infrastructure as defined in Table D.2 of PPS25: Development and Flood Risk.</p>	<p>~ / ✓</p> <p>Planning Policy Statement 25: Development and Flood Risk¹²⁵ requires regional planning bodies and local planning authorities to frame policies for the location of development which avoid flood risk to people and property where possible, and manage any residual risk, taking account of the impacts of climate change. It also requires them to use opportunities offered by new development to reduce the causes and impacts of flooding, e.g. surface water management plans; making the most of the benefits of green infrastructure for flood storage, conveyance and SUDS; re-creating functional floodplain; and setting back defences.</p> <p>The requirements vis-à-vis development in Flood Risk Zones 1, 2 and 3 reflect those in PPS25; however, the tone of the wording suggests that, as a matter of routine, development should be situated in the zone of lowest risk.</p> <p>It should be noted that in practice, in 2006, ten per cent of dwellings in England were built in Flood Zone 3 and seven per cent of land changing to residential use was within areas of high flood risk.</p>

¹²³ Flood Zones as described in PPS25, Development and Food Risk

¹²⁴ Communities and Local Government (2006). *Planning Policy Statement 25: Development and Flood Risk* [online] available at: <http://www.communities.gov.uk/publications/planningandbuilding/pps25floodrisk> (accessed 9 October 2008).

Table 3: Eco-towns standards (*continued*)

Topic	Standard	Does this represent an improvement on business-as-usual?
Waste	<p>Eco-town planning applications should include a sustainable waste and resources plan, covering both domestic and non-domestic waste¹²⁶, which:</p> <ul style="list-style-type: none"> • sets targets for residual waste levels, recycling levels and landfill diversion, all of which should be substantially more ambitious than the 2007 national Waste Strategy targets for 2020¹²⁷; the plan should demonstrate how these targets will be achieved, monitored and maintained; • establishes how all development will be designed so as to facilitate the achievement of these targets, including the provision of waste storage arrangements which allow for the separate collection of each of the 7 priority waste materials as identified in the Waste Strategy for England 2007; • provides evidence that consideration has been given to the use of locally generated waste as a fuel source for combined heat and power (CHP) generation for the eco-town; and • sets out how developers will ensure that no construction, demolition and excavation waste is sent to landfill, except for those types of waste where landfill is the least environmentally damaging option. 	<p>✓</p> <p>The Waste Strategy for England¹²⁸ has set the following targets for waste management in 2020:</p> <ul style="list-style-type: none"> • 50 per cent recycling and composting of household waste • 75 per cent recovery of municipal waste <p><i>“Targets will be reviewed in light of progress to 2010 and future forecasts, to see if they can be even more ambitious.”</i></p> <p>The Government is considering a target <i>“to halve the amount of construction, demolition and excavation wastes going to landfill by 2012”</i>.</p> <p>For household waste, the Code for Sustainable Homes provides the opportunity to score credits for the provision of storage space for 3 external recycling bins of specified capacity for individual dwellings. For blocks of flats, the opportunity to score credits is based on providing recycling containers to store at least 3 types of recyclable waste, which are then collected either by the local authority or through a private recycling scheme.</p>

¹²⁵ This standard does not apply to health and social care services’ medium and high risk waste, such as clinical and hazardous waste; these are covered by national regulations.

¹²⁶ The Waste strategy 2007 proposes national targets for waste for 2020 as follows: Residual waste reduction per person (amount left after reuse, recycling and composting)– from 370 kg in 2005 to 225 kg in 2020; Household re-use, recycling and composting – from 27 per cent in 2005 to 50 per cent in 2020; Residual waste recovery (recycling, composting and energy recovery) from 38 per cent in 2005 to 75 per cent in 2020.

¹²⁷ Department for Environment, Food and Rural Affairs (2007). *Waste Strategy for England 2007* [online] available at: <http://www.defra.gov.uk/ENVIRONMENT/WASTE/strategy/index.htm> (accessed 9 October 2008).

Table 3: Eco-towns standards (continued)

Topic	Standard	Does this represent an improvement on business-as-usual?
Waste (continued)		<p>For construction waste, the Code for Sustainable Homes provides the opportunity to score credits for the implementation of a site waste management plan and sorting of the waste stream. BREEAM provides the opportunity to score credits based on monitoring and/or separating at least 5 of 12 separate waste streams.</p> <p>The Draft PPS's explicit mention of considering locally generated waste as a fuel source, and specifying developers to set out how no construction related waste will be sent to landfill, is an improvement over the business-as-usual's specified recycling target improvements.</p> <p>Provision to facilitate separate collection of the 7 priority waste streams is a significant improvement above both business-as-usual and voluntary codes.</p>

2.6.8 From an environment and sustainability perspective, new settlements and particularly eco-towns offer several potential **benefits**:

- The opportunity to start from a blank canvass and design in environmentally-friendly technologies and infrastructure into the development from the outset. The eco-towns standards demand that public transport infrastructure, water efficiency measures, Sustainable Drainage Systems (SUDS) etc. are built in from the beginning.
- As well as technologies and infrastructure, eco-towns in particular afford the chance to promote more sustainable behaviours from the outset, for example, through designing the development such that car use is unnecessary for many trips.
- New settlements in general can relieve pressure for development in neighbouring urban areas where a strain on public services, green space and historic character may be increasingly evident.
- Eco-towns can provide inspiration for future developments and potentially a showcase for sustainable living. Indeed, much of the value of eco-towns will arise from the opportunity they present to demonstrate – particularly to large-scale developers – that development can significantly reduce its environmental impact.

- Many of the eco-town standards are ambitious. In particular, at least 50 per cent of trips originating in eco-towns must be made by non-car means (public transport, walking and cycling). Furthermore, where an eco-town is close to an existing settlement the target should be more than 50 per cent. The Draft PPS also raises the prospect of 'water neutrality', particularly in areas of serious water stress and this would certainly represent a step change in sustainable design. The green infrastructure standard could be particularly beneficial in relation to biodiversity requiring as it does that 40 per cent of the eco-town's total area should be allocated to green space.

2.6.9 From an environment and sustainability perspective, new settlements and particularly eco-towns present several key **challenges**:

- According to the Draft PPS, eco-towns are most appropriate when they are near to and well-connected to existing settlements, particularly major centres of employment, retail and leisure¹²⁸. Without adequate public transport links, there is a danger that residents will, by necessity, travel by car to nearby settlements thus clearly undermining the town's sustainability credentials. An investigation into the lessons from Cambourne – a new settlement 10 miles west of Cambridge – highlights the issues of employment and transport and the links between them: *"People identify the lack of local employment opportunities and the need to travel to work by car as the key issues in Cambourne's failure to be 'sustainable'"*¹²⁹.
- Eco-towns will inevitably generate further traffic on local roads; however, the Draft PPS states that planning applications should demonstrate measures to ensure that key connections around the eco-town do not become congested as a result of the development (doubtless a key concern on the part of nearby residents). The Draft PPS also seeks to avoid infrastructure 'lag', requiring that *"priority core services to underpin the low level of carbon emissions, such as public transport infrastructure and services, for when the first residents move in"*.
- There is an obvious risk in developing eco-towns that the development itself will have adverse impacts on biodiversity, the historic environment and the landscape and the general 'character' of an area that cannot be ameliorated through the development itself.
- Successfully implementing the vision for individual eco-towns will obviously be key to ensuring their future sustainability. There is a danger that the initial visions will be gradually eroded as time goes on and aspiration gives way to pragmatism and compromise. The investigation into the lessons from Cambourne concluded that *"The Master Plan*

¹²⁸ Communities and Local Government (2008). *Planning Policy Statement: Eco-Towns – Consultation document*

¹²⁹ Platt, S. (2007). *Lessons from Cambourne* [online] available at: <http://www.inspire-east.org.uk/FileAccess.aspx?id=744> (accessed 15 August 2008).

*vision for a new settlement tends to get watered down as the plan is put into practice*¹³⁰. Whether or not eco-towns achieve their aims is likely to depend to a large extent on the vigilance of Communities and Local Government, local authorities and communities in ensuring the delivery of the initial vision. The Draft Eco-towns PPS seeks to ensure this, stating that there should be a presumption in favour of the original masterplan.

- For eco-towns to be successful, residents will need to be genuinely committed to, and intimately involved in, delivery (for example, owning and managing community assets). Respondents to the most recent consultation pointed out the importance of being realistic about the appetite and willingness of residents and community organisations to take on what can prove complex, technical, and very time consuming responsibilities¹³¹.
- Developing a sense of community is likely to be challenging in the short-term and rests on far more than simply providing the necessary range of community facilities. The investigation into the lessons from Cambourne concluded that *“A sense of community is growing but will take time to fully develop. We need to be realistic about time scales and perhaps wait twenty years or so to judge Cambourne in terms of community well-being”*¹³². With this in mind, the draft PPS requires that planning applications should set out *“how developers will support the initial formation and growth of communities, through investment in community development and fluid-sector support, which enhances well-being and provide social structures through which issues can be addressed.”* It also requires that applications are accompanied by long-term governance structures for the development.

2.6.10 A key issue in relation to eco-towns is the extent to which, once established, they will become a focus for further development. This is obviously very difficult to foresee although further growth could have significant sustainability benefits assuming that the town’s sustainability credentials were maintained as expansion progressed (the Draft PPS states that future development should continue to meet the eco-town standards). On the other hand, further expansion could exacerbate any sustainability problems that emerge in developing the town and it will be essential that regional and local authorities monitor the success or otherwise of eco-towns particularly in relation to sustainable transport use and employment provision. The Draft PPS states that *“Where an eco-town has already been identified in the Eco-Towns Programme or in a development plan document or where a planning application for an eco-town has been approved, Regions should consider the location or the longer-term growth options for the eco-town”*¹³³.

¹³⁰ Platt, S. (2007). *Lessons from Cambourne* [online] available at: <http://www.inspire-east.org.uk/FileAccess.aspx?id=744> (accessed 15 August 2008).

¹³¹ Communities and Local Government (2008). *Eco-Towns: Living a Greener Future Consultation Report*

¹³² Platt, S. (2007). *Lessons from Cambourne* [online] available at: <http://www.inspire-east.org.uk/FileAccess.aspx?id=744> (accessed 15 August 2008).

¹³³ Communities and Local Government (2008). *Planning Policy Statement: Eco-Towns – Consultation document*

Summary – the situation with eco-towns

Locally:

- Additional new homes (up to 10 eco-town schemes should be well underway by 2016)
- An opportunity to provide family housing and respond to local housing need
- The chance to design in environmentally-friendly technologies and infrastructure from the outset (capitalising on economies of scale and increases in land value)
- The prospect of relieving development pressure on neighbouring urban areas
- A risk that residents will travel by car to nearby settlements, particularly to work, unless adequate public transport is put in place

Nationally:

- The opportunity to minimise the impact of new development on the environment, provide inspiration for future developments and potentially a showcase for sustainable living
- An opportunity to demonstrate that new settlements – an increasingly likely option for accommodating new housing – can be sustainable
- The potential to promote more sustainable behaviours and change attitudes
- The eco-town standards may be widely adopted and applied and so raise the bar for all new development

Conclusions

2.6.11 In light of the appraisal of the Draft PPS, our key **conclusions** are:

- Eco-towns are one means to address the twin challenges of increasing housing supply and raising environmental standards in housing
- Eco-towns represent a clear opportunity to integrate sustainability from the outset. As the TCPA argues, *“The primary opportunity presented by the development of an eco-town as a form of new settlement is cost efficiency in putting in place new infrastructure at the outset through initial planning”*¹³⁴.

¹³⁴ Town and Country Planning Association [online] available at: http://www.tcpa.org.uk/ecotowns/20080325_ET_WS_amos_Introduction.pdf (accessed 6 August 2008).

- Successfully implemented, eco-towns could promote the concept of new settlements as a credible and sustainable option for helping to accommodate additional housing and provide a showcase for more sustainable living
- Their success in sustainability terms will depend very much on the degree to which they promote a genuine modal shift towards more sustainable forms of transport (walking, cycling and public transport). If journeys to and from the towns are primarily by car then their other sustainability credentials will be undermined.
- The eco-town standards could potentially become embedded in the planning system and provide a benchmark for future developments including new settlements and urban extensions.

2.6.12 Table 4 summarises the impacts of the two options considered in the SA – the business-as-usual option (ie no eco-towns) and the Draft PPS (ie developing eco-towns) – while Table 5 highlights the key impacts associated with the Draft Eco-towns PPS.

Table 4: Business-as-usual vs. the Draft Eco-towns PPS

No eco-towns	Developing eco-towns
<ul style="list-style-type: none"> • The number of households in England will increase by 223,300 per year until 2026 • Only 205,000 additional new homes per year are provided for in Regional Spatial Strategies • There will not be enough housing to accommodate the forecast number of new households • Regional Spatial Strategies should provide for 240,000 new homes per year by 2016 • A short-term fall in house prices will not improve affordability prospects in the long run • Concentrating new housing in urban areas will become more difficult as urban brownfield land supplies dwindle • Energy use in the home for lighting and appliances may continue to increase • Household carbon emissions are projected to fall by a quarter by 2020 • New homes will be greener: all housing in England and Wales will be zero carbon by 2016 and water efficiency should improve 	<p>Locally:</p> <ul style="list-style-type: none"> • Additional new homes (up to 10 eco-town schemes should be well underway by 2016) • An opportunity to provide family housing and respond to local housing need • The chance to design in environmentally-friendly technologies and infrastructure from the outset (capitalising on economies of scale and increases in land value) • The prospect of relieving development pressure on neighbouring urban areas • A risk that residents will travel by car to nearby settlements, particularly to work, unless adequate public transport is put in place <p>Nationally:</p> <ul style="list-style-type: none"> • The opportunity to minimise the impact of new development on the environment, provide inspiration for future developments and potentially a showcase for sustainable living • An opportunity to demonstrate that new settlements – an increasingly likely option for accommodating new housing – can be sustainable • The potential to promote more sustainable behaviours and change attitudes • The eco-town standards may be widely adopted and applied and so raise the bar for all new development

Table 5: Key impacts associated with the Draft PPS

Impact	Key impacts
Positive	<ul style="list-style-type: none"> • Additional new homes (up to 10 eco-town schemes should be well underway by 2016) • An opportunity to provide family housing and respond to local housing need • The chance to design in environmentally-friendly technologies and infrastructure from the outset (capitalising on economies of scale and increases in land value) • The prospect of relieving development pressure on neighbouring urban areas • The opportunity to minimise the impact of new development on the environment, provide inspiration for future developments and potentially a showcase for sustainable living • An opportunity to demonstrate that new settlements – an increasingly likely option for accommodating new housing – can be sustainable • The potential to promote more sustainable behaviours and change attitudes • The eco-town standards may be widely adopted and applied and so raise the bar for all new development
Negative	<ul style="list-style-type: none"> • A risk that residents will travel by car to nearby settlements, particularly to work, unless adequate public transport is put in place (a highly significant negative impact) • The inevitable generation of additional local traffic and potential strain on services in nearby settlements • Potential impacts on biodiversity, the landscape, the historic environment and other receptors depending on the location
Short-term	<ul style="list-style-type: none"> • Additional new homes (up to 10 eco-town schemes should be well underway by 2016) • An opportunity to provide family housing and respond to local housing need • The chance to design in environmentally-friendly technologies and infrastructure from the outset (capitalising on economies of scale and increases in land value) • The prospect of relieving development pressure on neighbouring urban areas • The opportunity to minimise the impact of new development on the environment

Table 5: Key impacts associated with the Draft PPS (continued)

Impact	Key impacts
Medium to long-term	<ul style="list-style-type: none"> • An opportunity to demonstrate that new settlements – an increasingly likely option for accommodating new housing – can be sustainable • The potential to promote more sustainable behaviours and change attitudes • The opportunity to minimise the impact of new development on the environment, provide inspiration for future developments and potentially a showcase for sustainable living • The scope clearly exists for eco-towns to expand beyond their initial 5,000 – 20,000 new homes and become a focal point for development in the longer-term with a consequent impacts across a whole range of issues
Permanent	<ul style="list-style-type: none"> • An opportunity to demonstrate that new settlements – an increasingly likely option for accommodating new housing – can be sustainable • The potential to promote more sustainable behaviours and change attitudes • The opportunity to minimise the impact of new development on the environment, provide inspiration for future developments and potentially a showcase for sustainable living
Temporary	<ul style="list-style-type: none"> • Construction-related impacts associated with developing eco-towns • Transport-related impacts if community infrastructure is not in place when the first residents move in and people travel more than they ordinarily might to nearby settlements
Cumulative	<ul style="list-style-type: none"> • Additional traffic locally and potential strain on services in nearby settlements • The scope clearly exists for eco-towns to expand beyond their initial 5,000 – 20,000 new homes and become a focal point for development in the longer-term with a consequent impacts across a whole range of issues

Recommendations

2.6.13 In order to ensure that the SA findings were reflected in the Draft PPS, SA was also undertaken on an earlier working draft of the PPS. In light of the appraisal of the working draft PPS, Scott Wilson made a series of **recommendations** for strengthening the Draft Eco-towns PPS as set out in Table 6. Communities and Local Government response to these is set out in the Draft Planning Policy Statement.

Table 6: Scott Wilson’s recommendations to Communities and Local Government regarding the Draft Eco-towns PPS

<p>Scott Wilson recommendation</p> <p>Develop locational criteria for eco-towns distinct from development criteria</p> <p>The location of eco-towns and, in particular, their proximity to higher order settlements and their links with the public transport network are key determinants of their sustainability. With this in mind, we recommend that the Draft PPS be amended to include a set of specific locational criteria which, should as a rule, provide the initial basis for evaluating proposals. The existing eco-town criteria could re-labelled development criteria since they generally relate to the details of the proposal rather than the location itself. Possible locational criteria could include:</p> <ul style="list-style-type: none"> • Proximity to a higher order centre and a clear capacity for a public transport link to that centre • Proximity to existing sources of employment • Location in an area of high housing and affordable housing demand • Location in an area with potential for renewable energy generation • Compatibility with planning, development and regeneration objectives
<p>Communities and Local Government response</p> <p>Overall the recommendation on locational standards has been accepted and the draft PPS has been amended. Not all of the locational criteria set out in the above recommendation have been accepted, in particular the location of the eco-town to high housing and affordable housing demand, and potential for renewable energy. It is considered that there are many factors that will be taken into account in identifying suitable locations for eco-towns and high housing and affordable housing demand, although important, may conflict with other locational criteria such as proximity of employment opportunities and the needs for development and regeneration activities. All eco-town proposals must identify that over a year they will achieve zero or below net carbon emissions. It is for the scheme to ensure how this happens and therefore it is not necessary to restrict the locations of eco-towns to those areas with potential for renewable energy generation as this is a requirement of all eco-towns.</p>
<p>Scott Wilson recommendation</p> <p>Better consider benefits for existing communities</p> <p>The Draft PPS considers eco-towns somewhat in isolation and greater consideration should be given to their links with existing communities and the benefits that they might potentially provide in terms of community and green infrastructure for example.</p>
<p>Communities and Local Government response</p>

Table 6: Scott Wilson's recommendations to Communities and Local Government regarding the Draft Eco-towns PPS (continued)

We see the key characteristics of an eco-town being that it must be a new settlement, separate and distinct, but well linked to higher order centres, particularly where there is clear capacity for public transport links to that centre. The draft PPS sets out that for eco-towns to be successful they will need to be thriving and cohesive communities where residents want to live, work and raise their families from the outset.

It will be essential for developers preparing planning applications to demonstrate a high level of engagement and consultation with prospective and neighbouring communities.

Scott Wilson recommendation

Strengthen the affordable housing criterion

The eco-town criteria in relation to affordable housing (currently 30 per cent) should ideally be set at the figure for the relevant local authority since this will presumably be based on local affordability and housing need.

Communities and Local Government response

The draft PPS sets out that planning applications must provide for at least 30 per cent affordable housing (which includes social-rented and intermediate housing). Where local planning authorities, have up-to-date "development plan" policies on the provision of affordable housing these may be applied to an application for eco-towns where the local need is higher than the minimum 30 per cent. Planning Policy Statement 3: Housing sets out clear advice on how affordable housing targets should be set and applied at the local level.

Scott Wilson recommendation

Include a section in the PPS on 'landscape and the historic environment'

A section could be included in the Draft PPS on the 'landscape and the historic environment'. This could focus on procedures – for example, requiring proponents to undertake a landscape character assessment and a characterisation of the historic environment – and outcomes – ensuring that development is sympathetic to the landscape and conserves and enhances heritage assets.

Communities and Local Government response

The SA suggests a separate section in the eco-towns PPS on landscape and the historic environment. Existing planning policy such as PPG15 Planning and the Historic Environment sets out national policy on this, delivered at the regional and local level through RSS and LDFs. These are considered to be matters of regional and local significance, which will be handled at the appropriate level of plan-making, and will be taken into consideration in the decision making process.

Scott Wilson recommendation

Develop eco-standards for other forms of development (particularly eco-urban extensions)

Since other forms of development aside from new settlements are likely to provide the chief means for accommodating new housing development, we recommend that eco-standards are put together to govern the development of the eco-quarters, eco-extensions, eco-suburbs and eco-urban-villages referred to in the (working draft) Draft PPS. Developers and local authorities could once again be invited to submit proposals for funding with the aim of creating exemplar schemes. In addition to new developments, criteria for retrofitting existing stock could also be developed and proposals subsequently invited. Urban extensions are perhaps the most important category of development to benefit from eco-standards since these are likely to provide a major delivery vehicle for new homes around the country.

Table 6: Scott Wilson’s recommendations to Communities and Local Government regarding the Draft Eco-towns PPS (continued)

Communities and Local Government response

We recognise that we have set sustainability standards for eco-towns that are significantly above equivalent levels of development in existing towns. New settlements are not a new idea, nor the idea of zero carbon or environmentally sensitive developments. However bringing these two concepts together offers the potential to help meet the challenge of climate change and housing growth. The Eco-towns Programme is designed to support a limited number of exemplar schemes to demonstrate how we can live in a low carbon future.

We have set out in the draft PPS that eco-towns are not the only answer to these challenges, but eco-towns, as well as being exemplars, can make an important contribution to the overall package of measures. Alongside eco-towns we want to see development in towns, cities, suburbs and urban extensions built to the very highest environmental standards. We believe that eco-towns are a good model for future development, and that many of the principles and stretching criteria in this PPS could be adopted by other developers as a way of meeting the wider objectives of the Climate Change PPS and other planning policy on environmental protection.

2.7 What will be the situation *with* the Eco-towns Programme?

2.7.1 In addition to appraising the Draft Eco-towns PPS, Scott Wilson also appraised the 15 shortlisted eco-town locations and reasonable alternatives to these locations as appropriate. Each location is the subject of a dedicated chapter in the main report.

How was the appraisal undertaken?

2.7.2 For the purposes of the appraisal, the shortlisted locations and reasonable alternatives were evaluated in relation to a detailed set of issues: biodiversity and green infrastructure; climate change adaptation and flood risk; climate change mitigation; landscape and historic environment; waste; water resources and water quality; community infrastructure; community wellbeing; decent and affordable homes; transport and accessibility; employment and economy; and spatial issues.

2.7.3 In undertaking the appraisal for each location, we drew on a wide range of information including the Scoping Report; the developer’s proposal; discussions with the developer; discussions with the relevant local planning authority and, in some cases, the Government Office; the comments of the statutory consultees (English Heritage, the Environment Agency and Natural England); and discussions with Communities and Local Government. We also visited each of the shortlisted locations. We also undertook an assessment of cumulative effects from a regional perspective which is documented in the main report. The difficulties encountered in undertaking the appraisal are set out in the main report.

Alternatives

2.7.4 The SA and HRA of the Eco-towns Programme focused primarily on the 15 shortlisted locations. However, in some cases the relevant local planning authority suggested an alternative location – either through the consultation process or in discussions with Communities and Local Government and Scott Wilson. Where this alternative was deemed to fulfil the broad eco-town criteria, ie a distinct new settlement of 5,000 plus dwellings with a range of employment opportunities and where the proposal was in the vicinity of one of the 15 shortlisted sites, then this alternative was also subject to SA (and HRA). Furthermore, those locations banded C or above as part of Communities and Local Government's initial scrutiny (see Box 1) but not taken forward were also subject to SA (and HRA) where they were located in the vicinity of a shortlisted location and thus provided a reasonable alternative. Finally, some additional proposals were made by project proponents and their agents in response to the consultation on *Eco-towns: Living a greener future*¹³⁵. Again where such proposals fulfilled the eco-towns criteria and were in the vicinity of the 15 shortlisted locations, they were included in the SA (and HRA). The locations considered including the alternatives are summarised in Table 7. The rationale for including alternative locations was to assist Communities and Local Government in deciding which of the shortlisted locations to take forward.

¹³⁵ Communities and Local Government (2008). *Eco-towns: Living a greener future – consultation paper* [online] available at <http://www.communities.gov.uk/publications/housing/ecotownsgreenerfuture> (accessed 5 August 2008).

Table 7: Locations considered in the SA and HRA of the Eco-towns Programme

Shortlisted location	Alternative(s) considered	Source of alternative(s)
Pennbury (Stoughton)	N/A	
Middle Quinton	N/A	
Bordon-Whitehill	N/A	
Weston Otmoor	Shipton	One of the original 57 bids – Graded C in the cross-Government review
	North West Bicester	Proposed by Cherwell District Council
Ford	N/A	
St Austell (China Clay Community)	N/A	
Rossington	N/A	
Hanley Grange	Alconbury	One of the original 57 bids – Graded C in the cross-Government review
	Waterbeach	One of the original 57 bids – Graded C in the cross-Government review
Marston Vale	N/A	
North East Elsenham	N/A	
Rushcliffe (Nottinghamshire)	Kingston	The Kingston eco-town was one of the original 57 bids but was not shortlisted. However, Rushcliffe Borough Council was identified by Communities and Local Government as a broad geographical area suitable for an eco-town and therefore included in the <i>Living a greener future</i> consultation document. Following the identification of Rushcliffe as a suitable area, proposals were submitted by developers for two sites: Former RAF Newton/Bingham and Cotgrave Place.
	Former RAF Newton/Bingham	
	Cotgrave Place	
Greater Norwich (Coltishall)	Rackheath	Proposed by the Greater Norwich Development Partnership
Curborough	N/A	
Manby	N/A	

Table 7: Locations considered in the SA and HRA of the Eco-towns Programme (continued)

Shortlisted location	Alternative(s) considered	Source of alternative(s)
Leeds City Region	Burn Airfield	Following the launch of the Eco-towns Prospectus, a proposal was put forward for an eco-town in the Leeds City Region with the area of search focused on Leeds, York, Selby and Wakefield. Four alternative locations in the vicinity of Selby were proposed and each of these has been subject to SA and HRA. Other locations were also mooted – Aire Valley Leeds, North West York and the Bradford-Shipley Corridor – but were not considered to fully comply with eco-towns criteria; nonetheless Communities and Local Government remains potentially interested in Leeds City Region as a potential eco-town location.
	Church Fenton	
	Gascoigne Wood	
	Willow Green	

Appraisal findings

2.7.5 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. On the basis of this information, each location was graded A – C in terms of its suitability for an eco-town – see below and Table 8. Table 8 should be read in conjunction with the main report. The grading was determined on the basis of professional judgement informed by the evidence base assembled for each location.

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

Table 8: Summary of grading

Shortlisted location	Banding
Pennbury	B
Middle Quinton	B
Whitehill-Bordon	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
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

2.8 How should we monitor sustainability impacts?

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

of their overall sustainability. Indicators could include, for example, the proportion of the resident eco-town population who travel to work by public transport, walking and cycling and the number of eco-town residents employed within the town itself.

2.8.2 However, it will also be important that the wider 'lessons learned' in the planning, development and occupancy of eco-towns are effectively captured and disseminated. This will require gathering a wider range of information including on issues such as funding and partnership working and essentially telling the story of how the town was developed, the obstacles encountered and how these were negotiated. Inspiration could be taken from the *Lessons from Cambourne*, an evaluation of a new settlement 10 miles west of Cambridge and the insights this provides¹³⁶.

2.9 What happens next?

2.9.1 Following consultation on the Draft Eco-towns PPS and the SA (and HRA), and taking account of further work on transport and financial viability the Government will decide which of the locations should be included in the final Programme list and which of the schemes related to the locations will receive backing or financial support from the Government through funding or associated infrastructure or partner public bodies.

2.9.2 It should be noted that the SA has been undertaken at a strategic level and is therefore necessarily broad in its assessment, conclusions and recommendations. It constitutes the first of a series of successive assessments that will be undertaken for each of the eco-towns that are taken forward. As each tier of the planning system is negotiated and the eco-town proposals are further developed, a new and more detailed assessment will be required. For example, where the eco-town is included in a LDF, the proposal will be subject to SA and reappraised in the light of more detailed information that may be available and further mitigation measures may also be suggested. Planning applications for eco-towns will also need to include a detailed Environmental Impact Assessment (EIA) which will, in turn, also suggest detailed mitigation measures.

¹³⁶ Platt, S. (2007). *Lessons from Cambourne* [online] available at: <http://www.inspire-east.org.uk/FileAccess.aspx?id=744> (accessed 15 August 2008).

3 Habitats Regulations Assessment

3.1 Introduction

3.1.1 This section summarises the findings of the **Habitats Regulations Assessment (HRA)** of the Draft Eco-towns PPS and the Eco-towns Programme. HRA tests the impacts of a proposal on nature conservation sites of European importance – Special Areas of Conservation and Special Protection Areas – and is also a requirement under EU legislation for certain plans and projects¹³⁷.

3.2 Likely Significant Effects

3.2.1 In accordance with Stage 1 of the HRA process a short screening exercise – the Likely Significant Effects test – was undertaken for both the Draft Eco-towns PPS and the Eco-towns Programme (ie the shortlisted locations plus reasonable alternatives as appropriate) to determine whether or not they would be likely to have adverse effects on European sites. Where potential adverse effects are identified, an ‘Appropriate Assessment’ is required.

Draft Eco-towns PPS

3.2.2 The Draft PPS itself, without the details of the actual eco-town locations, has no clear spatial expression. As such, any HRA of the Draft PPS itself can only be made at the broadest level. This involves asking whether or not any clear cause-and-effect pathways exist between the content of the Draft PPS (ie the eco-towns concept and the standards governing their delivery) and potential adverse impacts on European sites. Our analysis indicated that no cause-and-effect pathways existed and, as such, it was concluded that further HRA work was unnecessary since the Draft PPS itself was unlikely in itself to give rise to adverse effects on European sites.

Eco-towns Programme

3.2.3 In contrast, the screening of the Eco-towns Programme indicated that development at the various locations could adversely impact on European sites as a result of:

- The effects of **urbanisation** (eg fly tipping, cat predation)
- **Recreational impacts** (eg trampling, disturbance)
- **Atmospheric pollution** (eg acidification, eutrophication)

¹³⁷ Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (the ‘Habitats Directive’) implemented through The Conservation (Natural Habitats, &c.) (Amendment) Regulations 2007

- Impacts on **water resources** (eg increased abstraction as a result of development reducing the water table at wetland sites)
- Impacts on **water quality** (eg effluent discharge)

3.2.4 Table 9 summarises some of the impacts associated with these issues. Note that direct landtake was scoped out of the possible impacts as it was determined that none of the eco-town locations would directly impinge on European sites.

Table 9: Potential impacts of eco-towns on European sites

Issue	Potential effects
Urbanisation	Impacts result from increased populations within close proximity to sensitive sites and include increased fly tipping (which can introduce invasive species with garden waste) and cat predation (a 1997 survey indicated that nine million British cats brought home 92 million prey items over a five-month period).
Recreational impacts	All types of terrestrial European site, including woodlands, can be affected by trampling , which in turn causes soil compaction and erosion. Motorcycle scrambling and off-road vehicle use can cause more serious erosion, as well as disturbance to sensitive species. Recreational activity (e.g. dog walking) can have a significant effect through disturbance (e.g. increased nest predation by natural predators as a result of adults being flushed from the nest and deterred from returning to it by the presence of people and dogs).
Atmospheric pollution	European sites can be vulnerable to pollutants. For example, SO ₂ , NO _x and ammonia all contribute to acidification and nitrogen deposition can lead to eutrophication . Eutrophication as a result of NO _x , for example, can alter the species composition of plant communities and eliminate sensitive species. Over half of all NO _x emissions come from vehicle exhausts and car use can reasonably be expected to increase as a result of eco-town development.
Water resources	There is a risk that increased abstraction – as a result of the need to secure water supplies for eco-towns – will lower water levels within watercourses that are designated as, or which feed, European sites, thereby reducing freshwater inputs. This could potentially lead, for example, to increased salinity of saltmarshes and increased sedimentation of river channels due to reduced flows.
Water quality	Sewage and industrial effluent discharges arising from new developments can contribute to increased nutrients on European sites leading to unfavourable conditions.

Urbanisation

3.2.5 At least two of the shortlisted eco-town locations – Whitehill-Bordon and St Austell (the Baal Pit location) – are located in close proximity to at least one European site. It was therefore concluded that adverse effects on European sites from the potential eco-towns as a result of urbanisation could not be described as unlikely and further investigation was required through an 'Appropriate Assessment'.

Recreational impacts

3.2.6 Analysis of the latest England Day Visits Survey¹³⁸ indicates that people typically travel:

- 10.8 miles (17.2 km) to visit a countryside site for the day
- 11.3 miles (18.1 km) to visit a woodland site for the day
- 16 miles (25.5 km) to visit a coastal site for the day.

3.2.7 Many of the shortlisted eco-town locations are within range of European sites, taking into account the average distances that were travelled by respondents to the England Day Visits Survey. It was therefore concluded that adverse effects on European sites from the potential eco-towns as a result of recreational pressure could not be described as unlikely and further investigation was required through an 'Appropriate Assessment'.

Atmospheric pollution

3.2.8 At least two of the shortlisted eco-towns – Whitehill-Bordon and St Austell – lie close to at least one European site (Woolmer Forest SAC/Wealden Heaths Phase 2 SPA and St Austell Clay Pits, respectively) that have several major roads within 200m, while the other eco-towns will inevitably contribute to an overall change in diffuse air quality. It was therefore concluded that adverse effects on European sites from the potential eco-towns as a result of deteriorating air quality could not be described as unlikely and further investigation was required through an 'Appropriate Assessment'.

Water resources

3.2.9 Given the complex mechanisms that can be used by water companies to meet existing and future water supply, it was concluded that adverse effects on European sites from the potential eco-towns as a result of increased abstraction from sensitive surface and groundwater sources could not be described as unlikely and further investigation was required through an 'Appropriate Assessment'.

Water quality

3.2.10 Given that long distance hydrological connections can exist between the watercourses into which treated effluent is discharged and downstream European sites (for example, the River Trent is not designated as a European site, but ultimately drains into the Humber Estuary which is designated), it was concluded that adverse effects on European sites from the potential eco-towns as a result of water quality could not be described as unlikely and further investigation was required through an 'Appropriate Assessment'.

¹³⁸ Natural England et al (2006). *England Leisure Visits: Report of the 2005 Survey* [online] available at: http://www.countryside.gov.uk/Images/ELVS%20Brochure%20_tcm2-31642.pdf (accessed 12 August 2008)

3.3 Appropriate Assessment

- 3.3.1 Where it was not possible to say that the eco-towns would not lead to an adverse effect on European sites as a result of the issues identified in the screening exercise, further site-specific investigation was required through an 'Appropriate Assessment'.

Urbanisation

- 3.3.2 It has not been possible at this early stage to conclude that the Whitehill-Bordon eco-town location and the Baal Pits component of the St Austell eco-town location would not lead to adverse effects on the Woolmer Forest SAC/Wealden Heaths Phase 2 SPA and St Austell Clay Pits SAC, respectively as a result of the general 'urbanisation' impacts (arson, noise, increases in the cat population etc.) that may result from the development of large new settlements within close proximity and amendments to the Draft PPS are therefore required to address this issue.

Recreational impacts

- 3.3.3 It has not been possible – largely due to an absence of accurate data on recreational catchments – to conclude with confidence that development at the eco-towns locations in Table 10 would not lead to adverse effects on European sites as a result of recreational pressure, when considered in combination with all other developments across the country promoted by Regional Spatial Strategies, without additional measures being included within the Draft PPS.

Table 10: European sites on which adverse effects as a result of increased recreational pressure could not be ruled out

Eco-Town	European sites on which adverse effects could not be ruled out
Pennbury	Rutland Water SPA
Whitehill-Bordon	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 Ebernoe Common SAC
Weston Otmoor	Oxford Meadows SAC Cothill Fen SAC
Shipton	Oxford Meadows SAC
North-West Bicester	Oxford Meadows SAC
Ford	Arun Valley SPA Duncton to Bignor Escarpment SAC Pagham Harbour SPA Chichester & Langstone Harbours SPA
St Austell (China Clay Community)	Brenay Common and Goss & Tregoss Moors SAC Polruan to Polperro SAC Fal & Helford SAC Newlyn Downs SAC River Camel SAC
Rossington	Hatfield Moor SAC Thorne Moor SAC Thorne & Hatfield Moors SPA
Alconbury	Portholme SAC Ouse Washes SAC/SPA and Ramsar site
Waterbeach	Devils Dyke SAC Ouse Washes SAC/SPA and Ramsar site
Coltishall	Norfolk Valley Fens SAC Broadlands SPA River Wensum SAC
Rackheath	Norfolk Valley Fens SAC Broadlands SPA River Wensum SAC

Table 10: European sites on which adverse effects as a result of increased recreational pressure could not be ruled out (continued)

Eco-Town	European sites on which adverse effects could not be ruled out
Curborough	River Mease SAC Cannock Chase SAC
Manby	Humber Estuary SPA
Burn Airfield	Skipwith Common SAC Lower Derwent Valley SAC Thorne Moor SAC Thorne & Hatfield Moor SPA Humber Estuary SAC/SPA and Ramsar site
Church Fenton	Skipwith Common SAC Lower Derwent Valley SAC Kirk Deighton SAC
Gascoigne Wood	Skipwith Common SAC Lower Derwent Valley SAC Humber Estuary SAC/SPA & Ramsar site
Willow Green	Skipwith Common SAC Thorne Moor SAC Thorne & Hatfield Moor SPA Humber Estuary SAC/SPA and Ramsar site

Air quality

- 3.3.4 Two of the potential eco-town locations – Whitehill-Bordon and the Baal Pits component of St Austell – are considered likely to significantly increase the vehicle movements on a network of roads that lie within 200m of European sites – specifically the Wealden Heaths Phase 2 SPA/Woolmer Forest SAC and Shortheath Common SAC and St Austell Clay Pits SAC, respectively. It will be particularly important for these eco-towns to maximise the use of non-road transport as much as possible in order to mitigate adverse effects on these European sites.
- 3.3.5 The most acute impacts of NO_x and SO₂ take place close to where they are emitted, but individual sources of pollution will also contribute to an increase in the general background levels of pollutants at a much wider scale, as small amounts of NO_x and other pollutants from the pollution source are dispersed by the prevailing winds.

- 3.3.6 Modelling undertaken for the draft South East Regional Spatial Strategy in 2006 concluded that additional emissions arising from developments of a similar size to the eco-towns represented only a small change to existing pollution levels. This was concluded to be because the additional housing, although numerically significant, represented only a small change to the total national housing stock. Similar-sized developments elsewhere in the country (ie the eco-towns) have been assumed to lead to increases of a similar scale and pattern.
- 3.3.7 While this increase in NO₂ concentrations is small, insufficient data exist to determine what the cumulative impact of these small-scale changes in NO₂ will be on European sites when considered alongside all other development planned within England (ie a national target of 240,000 new homes per year by 2016 and the delivery of 2 million homes by 2016 and 3 million by 2020 plus other development including employment-related development and infrastructure). Since many European sites are already subject to poor air quality, even a small amount of additional air pollution may prove significant in its cumulative effects even if each discrete development is only responsible for a minor increase in atmospheric pollution.
- 3.3.8 During their existence it is inevitable that at times (such as when making recreational visits to European sites) the population of the eco-towns will drive along roads that lie within 200m of European sites that are not in close proximity to the eco-town. This will, in turn, contribute to a cumulative increase in nitrogen deposition and an associated deterioration in ecological quality of parts of the European sites. While it is clearly impossible to quantify this issue at all it is reasonable to conclude that the situation will be most acute where major roads traverse European sites. Examples of these European sites are described in the main report.
- 3.3.9 In the absence of any further data or any ability to relate these incremental changes in air quality to particular European sites, or quantify the resulting effect, it is necessary to assume that, cumulatively, the levels of NO_x produced as a result of the new homes (and particularly the associated vehicles) delivered under the Eco-towns Programme, may contribute to a slow-down in air quality improvements. Measures are therefore required to ensure that the contribution of the eco-towns is minimised.

Water resources

- 3.3.10 It has not been possible to conclude with confidence that development at the eco-town locations in Table 11 would not lead to adverse effects on European sites as a result of additional demands on water resources, when considered in combination with all other developments across the country promoted by Regional Spatial Strategies, without additional measures being included within the Draft PPS.

Table 11: European sites on which adverse effects as a result of increased demand for water resources could not be ruled out

Eco-Town	European sites on which adverse effects could not be ruled out
Pennbury	Water supply strategy uncertain at this stage but likely to include Humber Estuary SPA as a result of hydrological pathway via River Trent
Middle-Quinton	Severn Estuary SAC/SPA (via the River Stour)
Whitehill-Bordon	Water supply strategy uncertain at this stage
Ford	Pagham Harbour SPA Chichester & Langstone Harbours SPA
Rossington	Hatfield Moor SAC Thorne Moor SAC Thorne & Hatfield Moors SPA
Hanley Grange	Ouse Washes SPA/SAC The Wash SPA/SAC
Alconbury	Ouse Washes SPA/SAC The Wash SPA/SAC
Waterbeach	Ouse Washes SPA/SAC The Wash SPA/SAC
Marston Vale	Ouse Washes SPA/SAC The Wash SPA/SAC
North East Elsenham	Water supply strategy uncertain at this stage but possibly the Colne Estuary SPA (Essex Estuaries SAC)
Rushcliffe (all alternatives)	Water supply strategy uncertain at this stage
Coltishall	Water supply strategy uncertain at this stage
Rackheath	Water supply strategy uncertain at this stage
Curborough	Cannock Chase SAC Humber Estuary SPA
Manby	Humber Estuary SPA Saltfleetby-Theddlethorpe Dunes & Gibraltar Point SAC
Leeds City Region (all alternatives)	Humber Estuary SPA (via the River Aire)

Water quality

- 3.3.11 It has not been possible to conclude with confidence that development at the eco-town locations in Table 12 would not lead to adverse effects on European sites as a result of deteriorating water quality from increased volumes of treated sewage effluent, when considered in combination with all other developments across the country promoted by Regional Spatial Strategies, without additional measures being included within the Draft PPS.

Table 12: European sites on which adverse effects as a result of deteriorating water quality could not be ruled out

Eco-Town	European sites on which adverse effects could not be ruled out
Pennbury	Humber Estuary SPA as a result of hydrological pathway via River Trent
Middle Quinton	Severn Estuary SAC/SPA (via the River Stour)
Rossington	Humber Estuary SPA (via River Trent)
Hanley Grange	Portholme SAC Ouse Washes SPA/SAC The Wash SPA/SAC
Alconbury	Portholme SAC Ouse Washes SPA/SAC The Wash SPA/SAC
Waterbeach	Portholme SAC Ouse Washes SPA/SAC The Wash SPA/SAC
Marston Vale	Ouse Washes SPA/SAC The Wash SPA/SAC
Rushcliffe (all alternatives)	Humber Estuary SPA (via River Trent)
Coltishall	Broadlands SPA
Rackheath	Broadlands SPA
Curborough	Humber Estuary SPA
Manby	Humber Estuary SPA Saltfleetby-Theddlethorpe Dunes & Gibraltar Point SAC
Leeds City Region (all alternatives)	Humber Estuary SPA (via River Aire)

3.4 Avoidance and mitigation

3.4.1 In light of the HRA findings, additional measures are therefore required within the Draft PPS to provide sufficient direction (in terms of both scope and detail) to enable eco-towns to deliver the detailed site-specific measures necessary to avoid or mitigate adverse effects. When considering these recommendations for mitigation and avoidance measures, it is essential to bear in mind that these are recommendations for a national level PPS. As such, they are constrained by the fact that individual components of the PPS cannot be tailored to specific eco-towns but must be sufficiently general to cover all the potential eco-town developments and any future developments that will seek to acquire the 'Eco-town' label.

Urbanisation

- 3.4.2 Given that issues of urbanisation impact require detailed information on the design of the development in order to explore them thoroughly, it is not considered appropriate at this stage to require a blanket set-back distance of the Whitehill-Bordon or St Austell eco-towns from the two European sites that they currently abut (Woolmer Forest SAC/Wealden Heaths Phase 2 SPA and St Austell Clay Pits SAC, respectively). Rather, if these eco-towns are taken forward, it must be made clear that this issue will need to be re-explored and clarified as part of the project-level HRA for the eco-town.

Recreational impacts

- 3.4.3 The Draft Eco-towns PPS states that 40 per cent of the eco-town's total area should be allocated to green space, of which at least half should be public and consist of a network of well managed, high quality green/open spaces which are linked to the wider countryside. Planning applications should demonstrate a range of types of green space, for example community forests, wetland areas and town squares. The space should be multifunctional, eg accessible for play and recreation by residents walking or cycling safely and easily, and to support wildlife, urban cooling and flood management.
- 3.4.4 The scale of greenspace provision required (40 per cent of the total area) and the reference to habitats of potential biodiversity value (eg community forests) could reduce the extent to which residents are likely to visit European sites and thereby minimise any potential increase in visitor pressure.
- 3.4.5 Due to the limitations of the assessment tools and data available at this time – and, in particular, the inability to quantify the number of residents of each eco-town that will be making use of the European sites in question and what proportion of the total cumulative load this represents – coupled with the need for any standards within the PPS to be generally applicable, it is not possible to specify an exact quantity of alternative natural greenspace that will need to be provided for individual eco-towns in order to absorb recreational visitors to such an extent that they will not materially contribute towards recreational pressure on the European sites in question.
- 3.4.6 While specific standards for the provision of open space have been developed for the Thames Basin Heaths SPA (known as Suitable Accessible Natural Greenspace or SANGs), it is acknowledged that they are not necessarily universally applicable. However, Natural England's more general Accessible Natural Greenspace Standards (ANGSt) provide a set of benchmarks for ensuring access to places of wildlife interest and were specifically developed to provide size and distance criteria to provide natural spaces that will contribute most towards sustainable use of recreational resources. While the criteria were not developed with the specific intention of mitigating for adverse impacts on European sites, they were intended to

specify a level of semi-natural greenspace provision that would meet the needs of a development's population.

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

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

- As a minimum, new areas of natural (as opposed to more formal) greenspace created as part of the 40 per cent area allocation indicated above should be provided in alignment with the Natural England Accessible Natural Greenspace Standard (ANGSt), which would require the provision of a natural greenspace (as opposed to a more formal park) of at least 2 hectares in size, no more than 300 metres from the houses it is intended to serve, and new statutory Local Nature Reserves at a minimum level of one hectare per thousand population. If, after the project-level Appropriate Assessment for the eco-town, it is considered that the ANGSt level of provision will be inadequate to reduce the recreational pressure on a European site then a higher level of provision should be made, in line with the conclusions of the project assessment.
- Where the eco-town proponents intend to include existing areas of publically accessible semi-natural greenspace within their allocation in order to meet these standards, they would need to demonstrate that sufficient capacity remained within these sites to absorb the new population from the eco-town.
- The relevant greenspace would need to be provided in advance of occupation of the eco-town and will need to serve a similar recreational function to the European sites from which it is intended to draw recreational users (eg dog-walking and appreciation of nature).
- It is acknowledged that there are some European sites which have an intrinsic appeal that is sufficiently great that the provision of alternative greenspace is unlikely to result in a material reduction in recreational pressure. In these cases the developer would need to liaise with stakeholders managing the European site to assist in the development and long-term delivery of an appropriate Site Management Plan,

particularly addressing any changes in management that would be necessary to respond to increased visitor numbers or to constrain or manage such an increase. Precise details of measures to be implemented and the actual scale of any contribution would need to be agreed with Natural England and other stakeholders at the project-level Appropriate Assessment but these may need to include car park closures, fencing and moving of footpaths informed by data on visitor behaviour patterns on the European site in question.

Air quality

- 3.4.9 Due to the precautionary approach that must be taken to Appropriate Assessment at this early stage of eco-town development, one of the proposed eco-town locations – Whitehill-Bordon – is considered likely to significantly increase the vehicle movements on a network of roads that lie within 200m of European sites – specifically the Wealden Heaths Phase 2 SPA/Woolmer Forest SAC and Shortheath Common SAC. It will be particularly important for this eco-town to maximise use of non-road transport as much as possible in order to mitigate adverse effects on these European sites. Although the Draft Eco-towns PPS does consider air quality, this is restricted to consideration of carbon emissions, whereas at a local level NO_x emissions are of more immediate relevance to these European sites.
- 3.4.10 Mitigation at the strategic level is difficult because of a lack of precedents and consequently monitoring data. In our view it would not be reasonable to conclude that potential impacts are such that no development could ever be accommodated. However, we propose that the PPS should:
- incorporate an extensive suite of measures to encourage the use of sustainable transport, maximise the provision of such transport and discourage car use as far as possible;
 - require planning applications to undertake transport assessments through which it can be demonstrated that all opportunities are being taken for minimising car use; and
 - couple these measures with monitoring air quality in the European site before and for a number of years after introduction of the measures, such that further measures can be devised if the air quality does not improve (or at least remains similar to that prior to eco-town development).
- 3.4.11 The transport standards in the Draft Eco-towns PPS included a number of robust measures to encourage use of non-road transport and these will contribute considerably to avoiding a local increase in NO_x emissions from traffic. We believe that these measures would meet the first two of the criteria we have listed above, but that the PPS should also incorporate a direction that:

- all homes should be within an easy walk of core services (such as schools, local shops, health services and sports facilities) and of a frequent and high quality public transport service linking business and residential areas and the wider transport network; and
- all air quality improvement measures should be coupled with monitoring of the air quality in the European site before and for a number of years after introduction of the measures, such that further measures can be devised if the air quality does not improve.

3.4.12 With these measures in place it is considered that the Draft PPS will have gone as far as it can in ensuring that the local air quality effects on European sites from the Whitehill-Bordon development are minimised as well as the contribution of the eco-towns collectively to diffuse air pollution.

Water resources

3.4.13 Due the precautionary approach that must be taken to Appropriate Assessment at this early stage of eco-town development, it has not been possible to conclude with confidence that many of the evaluated eco-town locations would not lead to adverse effects on European sites as a result of additional demands on water resources, when considered in combination with all other developments across the country promoted through the Regional Spatial Strategies, without additional measures being included within the Draft Eco-towns PPS.

3.4.14 Avoiding an adverse effect is largely in the hands of the Water Companies (through their resource planning) and the Environment Agency (through their abstraction licensing process). However, there are actions that can be taken by local authorities and central Government through the PPS. The Draft Eco-towns PPS includes two robust measures to maximise water efficiencies and these will contribute considerably to minimising water consumption and therefore mitigating adverse effects on European sites arising from the eco-towns: eco-towns in areas of serious water stress should aspire to water neutrality, ie achieving development without increasing overall water use across a wider area; and new homes must be equipped to meet the water consumption requirement of Level 5 of the Code for Sustainable Homes.

3.4.15 However, it is recommended that the following additions are incorporated in order for it to be more robust:

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

Water quality

3.4.16 Due to the precautionary approach that must be taken to Appropriate Assessment at this early stage of eco-town development, it has not been possible to conclude with confidence that several of the evaluated eco-towns would not lead to adverse effects on European sites as a result of deteriorating water quality from increased volumes of treated sewage effluent, when considered in combination with all other developments across the country promoted through the Regional Spatial Strategies, without additional measures being included within the Draft Eco-towns PPS.

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

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

3.4.18 Communities and Local Government's response to our recommendations is set out in the Draft Eco-towns Planning Policy Statement Consultation Document.

3.4.19 What happens next?

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

Glossary

Abbreviation

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

MBC	Metropolitan Borough Council
MRF	Material Recycling Facility
MUSCO	Multi-Utility Supply Company
NNR	National Nature Reserve
ONS	Office of National Statistics
PDL	Previously Developed Land
PUA	Principal Urban Area
RDF	Refuse Derived Fuel
RPB	Regional Planning Body
RTR	Rapid Transit Route
SA	Sustainability Appraisal
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