



Chapter 5

Attractive landscapes

Attractive landscapes

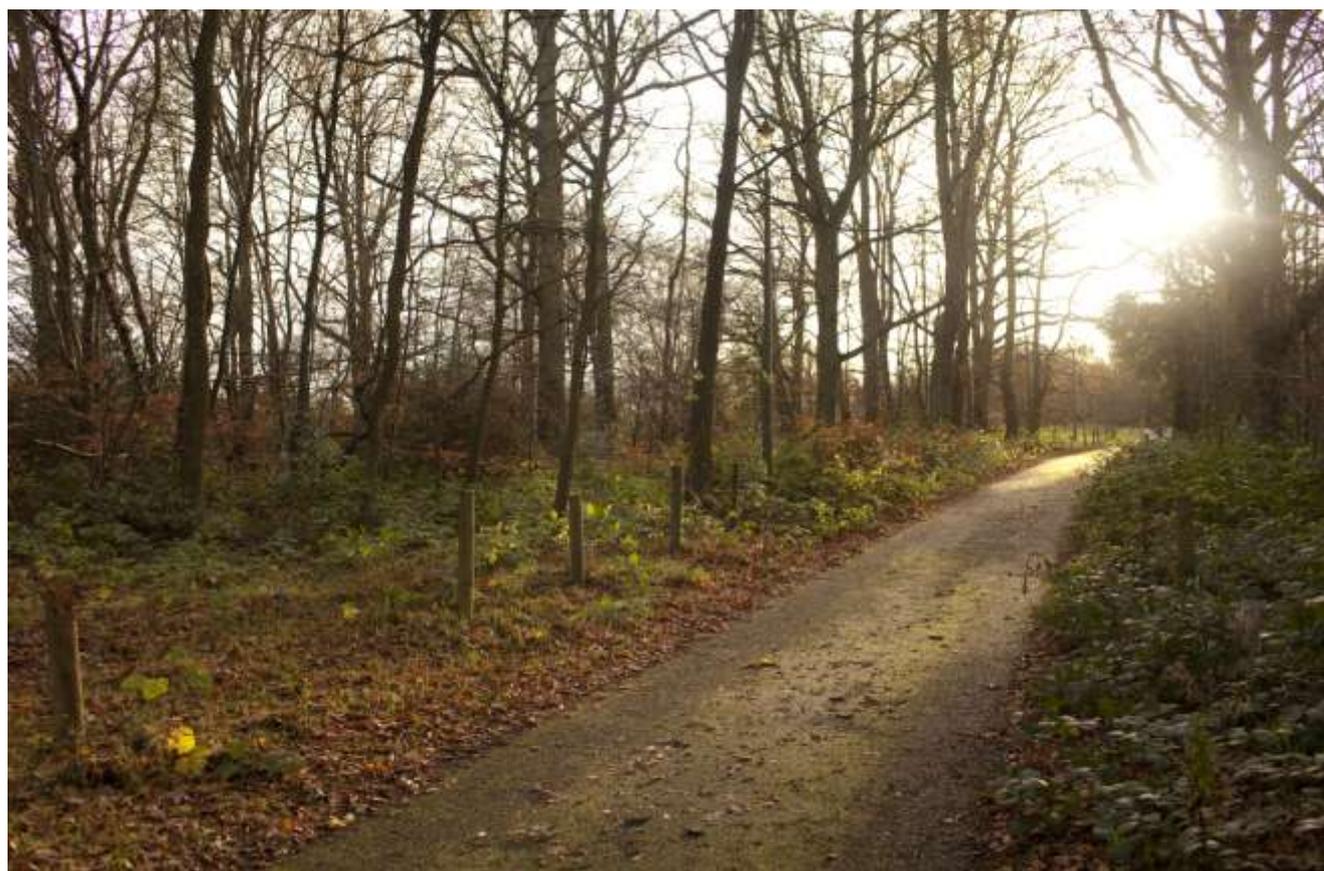
Introduction

This section reviews the contribution Green Belt land is making to the positive land use objectives in PPG2 relating to Objective 3: retaining and enhancing attractive landscapes, and Objective 4: improving damaged and derelict land.

All landscapes matter

Our landscapes are diverse and include rural, urban and coastal areas. They are the unique result of the interaction between natural and cultural influences over time. All landscapes matter and are important at a local scale.

A small area of the Green Belt is designated as either a National Park (just 84 hectares¹) or Area of Outstanding Natural Beauty (9% compared to 16% of England as a whole and 13% of the Comparator Areas). The amount of land designated as an AONB varies considerably between Green Belt areas. Some have none (Cambridge, York, Nottingham and Derby, Stoke-on-Trent and Burton-upon -Trent and Swadlincote) while a quarter of the Metropolitan Green Belt around London is AONB, and more than a fifth of the Avon Green Belt (Table 11). Figure 16 shows the location of the landscape designations relative to Green Belt.



¹ 84 hectares now remain since the Green Belt designation was removed from the New Forest when the land became National Park in 2006.

Green Belt landscapes outside the AONBs can also be attractive and are perceived as such by the public. Of the 1026 people surveyed by CPRE in and around Bristol, London and Merseyside, over 95% agreed or strongly agreed with the statement that the countryside in their area was beautiful. Although some landowners or land managers dissented from this view, a clear majority (over 80%) of those surveyed still agreed or strongly agreed².

Are two designations better than one?

With significant parts of some Green Belt areas also designated as AONB it is legitimate to ask whether both designations are necessary.

While the purposes of the two designations are different, in planning terms the controls on development appear similar, with an 'exceptional circumstances' test for major development for AONBs paralleling the 'very special circumstances' test applying to Green Belts. In practice, however, development can be and often is allowed in AONBs where it can be assimilated into the landscape, or is seen as fostering social and community well-being. In Green Belts, by comparison, the overriding need is for open countryside to prevent urban sprawl. The two designations in the same area provide more weight to the effectiveness of planning control against both major and inappropriate development.

In addition to planning considerations, the AONB designation is complementary to the Green Belt positive land use objectives. It brings additional resources for landscape conservation and enhancement, and for recreational use. Though, unlike National Parks, AONBs lack dedicated planning authorities, they do have statutory management plans and officers responsible for their management.

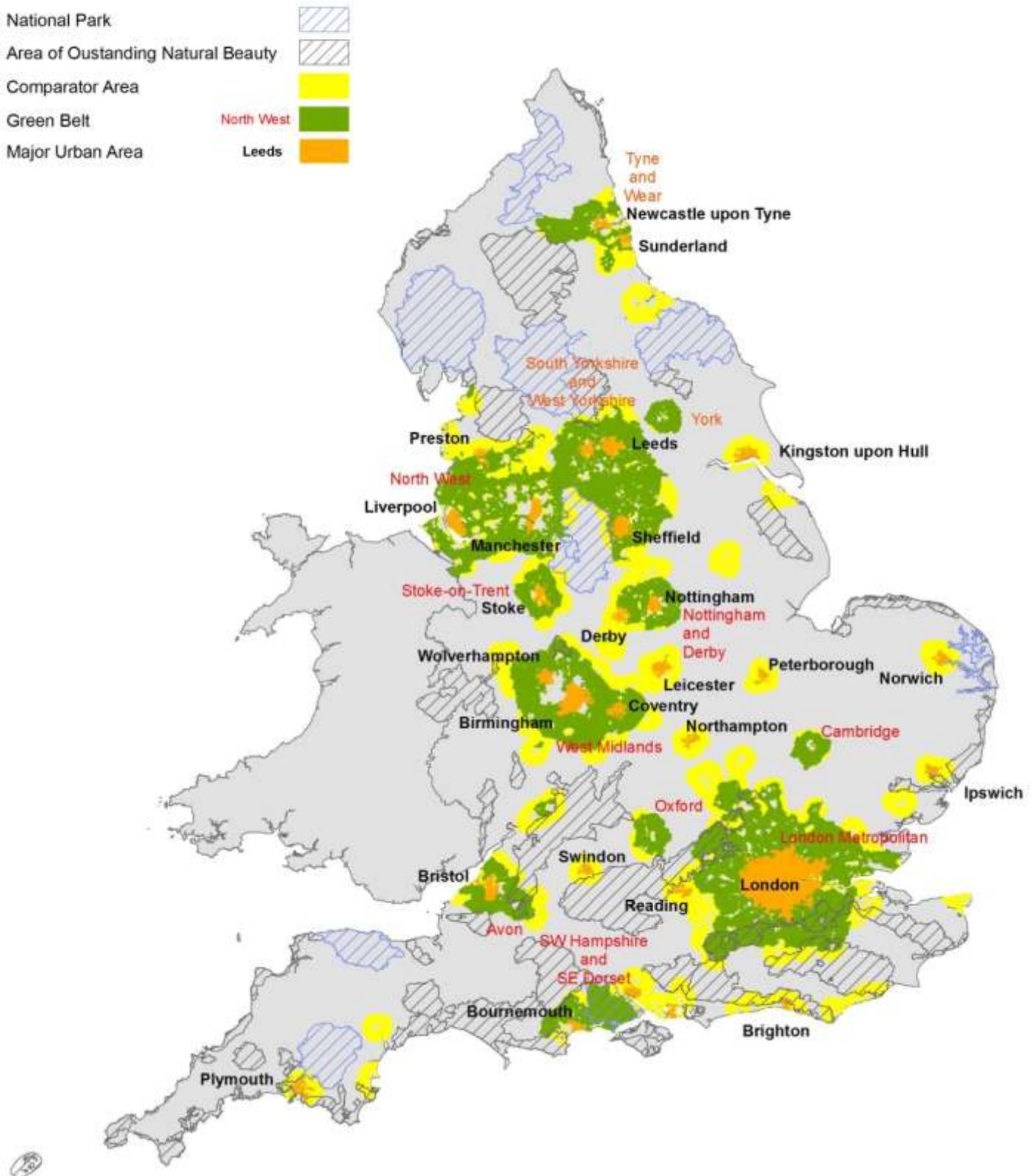
Taking all these factors in to account there is still much to be gained by having Green Belt designation alongside AONB designations. The tighter Green Belt planning controls protects the integrity of the AONB designation close to major towns and cities and at the same time the AONB designation brings additional resources for access and environmental management.

Landscape scale management

The natural environment is constantly subject to change influenced by both natural processes and human impact. To ensure that the character and biodiversity of areas are maintained it is important to plan and manage at a landscape scale. Community Forests are a good example of putting landscape scale management into practice and in this report the case studies featuring the Dearne Valley in South Yorkshire and the Essex Rainham Marshes also demonstrate what can be achieved. Natural England will be analysing landscape scale projects to learn lessons for the future, and to produce best practice guidelines. The Green Belt will be both a source of information and a focus for these guidelines, given their importance to so many people and their location close to centres of population.

² See methodology in appendix for details of survey work commissioned by CPRE for this project.

Figure 16 – Map of Green Belt and national landscape designations



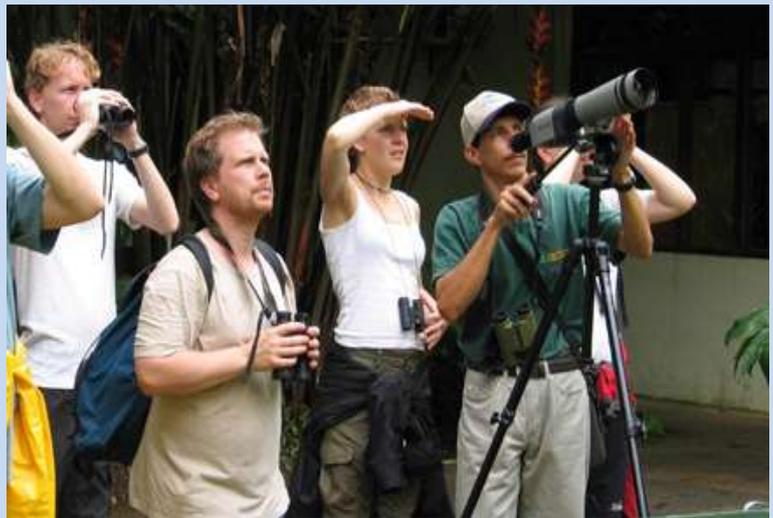
Green Belt Case Study

The **Dearne Valley: Green Heart Project** in the South Yorkshire Green Belt is transforming a major former coal mining area into a network of green spaces, farmland and wetlands between former mining villages and the 'greened' coal tips of the higher ground.



The Vision for the Dearne Valley

- To create a landscape designed to allow people and wildlife to adapt to an uncertain future.
- To provide economic regeneration benefits that also contribute to a healthy natural environment.
- An area that makes contact with nature an everyday experience for local people.



Project Aims

The Environment Agency, Natural England and the RSPB believe that the Dearne Valley can be a better place to live and attract investment by:

- creating new wetlands that champion the very best environmental quality in the flood plain;
- improving access so that people can walk or cycle to their place of work, education or leisure;
- targeting agri-environment funding to promote less intensive farming;
- enhancing the management of existing open spaces for people and wildlife;
- implementing best practice for building design and development control; and
- supporting action to tackle climate change.



Quality of landscape

An understanding of the quality of the landscape can be gained from the findings of the Countryside Quality Counts (CQC) project³. The project sought to measure change in countryside quality based upon seven landscape variables: Agriculture; Boundary Features; Trees and Woodland; Historic Features; Semi-Natural Habitat; River and Coastal; Settlement and Development. It is not possible to gain a comprehensive assessment of the quality of all Green Belt land from this work because the 159 National Character Areas (NCA) used to assess the landscape do not match Green Belt boundaries. However, by assessing the percentage of each Green Belt covered by the National Character Areas it is possible to identify a dominant character assessment that accounts for approximately 95% of the overall surface area covered by England’s Green Belts (Table 12, Figure 17).

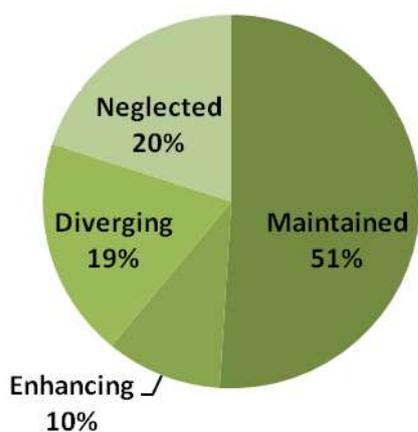
Figure 17 – Character assessment for Green Belt land

Green Belt Areas	Dominant Character Assessment			
	(% of area that character assessment relates to)			
Avon	Neglected (59%)		Enhancing (33%)	
Burton-on-Trent/ Swadlincote	Enhancing (67%)		Maintained (33%)	
Cambridge	Maintained (95%)			
Gloucester and Cheltenham	Diverging (93%)			
London (Metropolitan)	Maintained (55%)		Diverging (42%)	
North West	Diverging (70%)		Neglected (21%)	
Nottingham/Derby	Diverging (47%)		Neglected (36%)	
Oxford	Maintained (99%)			
S&W Yorkshire	Maintained (44%)		Neglected (32%)	
SW Hants and SE Dorset	Maintained (65%)		Neglected (35%)	
Stoke-on-Trent	Maintained (64%)		Neglected (36%)	
Tyne and Wear	Neglected (51%)		Maintained (43%)	
West Midlands	Diverging (72%)		Maintained (22%)	
York	Neglected (100%)			
All Green Belts	Maintained or enhancing (38%)		Diverging (36%)	
			Neglected (20%)	

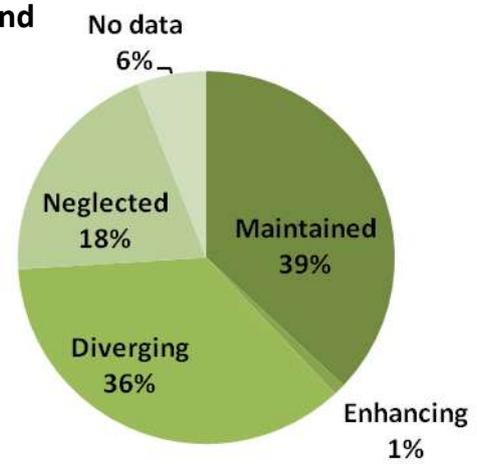
³ www.countryside-quality-counts.org.uk

	Consistent with character in late 1990s	Inconsistent with character in late 1990s
Stable	Maintained Character is strong and intact. Changes observed serve to sustain it. Lack of change means qualities likely to be retained.	Neglected Character of area weakened or eroded by past change or changes observed were not sufficient to restore qualities that made area distinct.
Changing	Enhancing Changes have restored or strengthened character of area.	Diverging Change is transforming character so that distinctive qualities are being lost or new patterns are emerging.

All England



Green Belt land



This analysis of landscape change suggests that the majority of individual Green Belts and a significant proportion (39%) of the overall Green Belt land area are stable and maintaining an established landscape character. In 36% of the overall area a new landscape character is emerging. In some cases (such as in the Green Belts in the Midlands or the North of England) this can be explained by changes associated with de-industrialisation of areas mapped as 'industrial' landscapes. Otherwise the new landscape character is more to do with subtle but often extensive changes in land management practices or small scale development, than with major development or land use change.

An example of this, raised in Chapter 3, is the phenomenon of scattered residential development, where existing structures are converted or new dwellings built within the footprint of an existing property. This has altered the character of many areas. Several of the diverging Green Belt landscapes contain a large proportion of former coal mining districts many of which are in a phase of landscape transition. Three Green Belt areas are predominantly neglected but, contrary to perceptions held in some quarters (see Chapter 2 above), the overall proportion of Green Belt land that is considered 'neglected' is lower than for England as a whole. Perhaps of more concern is that the character of the landscape in the overall Green Belt area is being 'enhanced' or strengthened in only 1% of the area, compared to 10% of England.

Towards active management of the Green Belt

Management Strategies for Green Belts, produced through the planning process, provide a means to identify potential funding opportunities for landscape improvement and to establish programmes. A dedicated local strategy has been produced by the London Borough of Harrow, including details of farm holdings in Green Belt areas and includes policies on visitor attractions and reducing litter through

teaching in schools. Many of England's Green Belts cross over several local authority boundaries or are in areas covered by two tiers of local government. In two tier areas there is often a division of responsibilities between a local planning authority (a district or borough council) and a county council that has responsibilities for or resources relating to farm holdings, public rights of way and landscape. A wider, strategic approach to managing the Green Belt can be helpful in such areas.

In April 2009 the West Midlands Regional Assembly's Regional Environment Partnership published a study titled 'Examination of Positive Uses of the West Midlands Green Belts'. The study examined the opportunities for the delivery of improved public benefits from the West Midlands Green Belts and how the Regional Spatial Strategy could promote such objectives. The study also considered whether there is value in identifying specific roles and functions to spatially distinct areas across the Green Belts and, in so doing sub-divided the Green Belt in to three characteristic areas known as Green Belt Area Types – 'Urban Spaces', 'Rural Fringe' and Outer Green Belt'.

The Study developed a single holistic set of sustainable objectives for the Green Belts based on PPG2 land use objectives along with more contemporary principles such as ecosystem services, climate change adaptation, and Green Infrastructure.

Damaged and derelict land

Despite evidence that many of the Green Belt areas have considerable areas of natural beauty and landscapes which are maintained or enhancing, there remains a perception that damaged, derelict or vacant land is a common feature of Green Belt⁴. As demonstrated above, Green Belt land is under more pressure for development than the wider countryside but a significant proportion retains its predominantly rural character – more than the area considered neglected. Certain areas of the Green Belt and the Comparator Areas, particularly those that abut the urban fringe, may appear unkempt but such land is not characteristic of the Green Belt as a whole and analysis of the available information on previously developed or 'damaged' agricultural land demonstrates this⁵.

This is also supported with data from Homes and Communities Agency which shows that only 2904⁶ hectares of the Green Belt is vacant or derelict brownfield land. This equates to just 0.2% of the total area of Green Belt and less than 2.5% of the area of Green Belt that is classed as 'developed land' (Table 13a and 13b).

A similar picture was presented in an older (1989) survey by the London Planning Advisory Committee of damaged land (including agricultural land) in Metropolitan Green Belt in Greater London. It identified just 900 ha of damaged land from information provided by nine outer London Boroughs which together are likely to be responsible for well over half the total Green Belt area (33,400 ha) within Greater London. Over half of the area covered by the nine boroughs was found to be associated with former mineral workings. On this basis one can estimate that under 5% of the Metropolitan Green Belt in Greater London (which in turn forms less than 10% of the Metropolitan Green Belt as a whole) could be described as degraded. It is also important to note that a relatively small proportion of this degraded land could be described as derelict in the sense of not being capable of beneficial use without treatment and 40% involved land considered damaged as a result of intensive agricultural uses, overgrazing or the

⁴ The responses to questions on Green Belt in Natural England's national survey revealed 5% associated Green Belt with derelict land.

⁵ Peter Bibby analysis of National Land Use Data.

⁶ Vacant land 876 hectares; derelict land 2,028 hectares

keeping of horses⁷. However, derelict land can be restored and reused and the Dearne Valley case study above provides an example of how this can be achieved.

Litter and fly-tipping

Fly tipping and illegal waste disposal can also cause serious damage to both the appearance and function of the landscape. The problem takes a wide variety of forms, from the criminally organised operations to casual and opportunist dumping of waste. A major factor in fly tipping is proximity of a given place to a major road or thorough fare. The fact a place is relatively isolated both physically and temporally is also a strong contributing factor. This problem exists in all environments and not just the Green Belt.

A 2003 study by Catherine Bickmore Associates⁸ investigated anecdotal reports by farmers that persistent fly-tipping is a particular problem in urban fringe areas (including but not limited to Green Belt). The study drew on 2003 data finding that fly tipping is considered to be a significant problem by 73% of local authorities in England, Scotland and Northern Ireland with an estimated cost to farmers of £57 million in 2002. In 2001, it was estimated to represent around 600,000 tonnes of waste. More recent research by the Environment Agency and the National Fly-Tipping Prevention Group broadly bears out these figures and suggests that a significant majority of farmers and landowners are affected. Specific figures are not available, however, for the Green Belt or the urban fringe.

CPRE campaigns actively to address the problems of litter and fly-tipping through its *Stop the Drop* campaign⁹. Views were sought in the CPRE survey¹⁰ on how litter and fly-tipping are affecting countryside in the Green Belt. The response showed that the issue is clearly a concern. Seventy-nine percent of all respondents had seen litter in the Green Belt at least occasionally. Amongst land professionals surveyed in the Metropolitan Green Belt, this figure is 100%. Across the three areas that CPRE surveyed, approximately 20% more land professionals than the public had seen waste 'often'. A recurrent theme in responses was that the problem was concentrated next to major roads, such as the M25 around London or the A38 south of Bristol, demonstrating that much of the problem of litter is caused by people throwing rubbish out of car windows.

Analysis of responses identified specific hotspots for litter and fly-tipping in the three Green Belt areas surveyed:

- Avon: Dundry Hill – a familiar landmark for Bristol which in landscape terms is an outcrop of the Mendip Hills (an AONB outside the Green Belt); and Combe Hay Lane in Bath near the Odd Down Park and Ride site, and also part of the Cotswolds AONB.
- London: Epping Forest – one of the most important areas of natural green space in the Metropolitan area.
- Merseyside: the Sefton Coast – which also features Anthony Gormley's artwork 'Another Place' and much of which is also a wildlife site of national and international importance¹¹.

⁷ LPAC, *Damaged Land in the Urban Fringe*, Land Capability Consultants 1990.

⁸ Catherine Bickmore Associates, 'The State and Potential of Agriculture in the Urban Fringe', 2003, Box 5.5.

⁹ For more details go to www.cpre.org.uk/campaigns/stop-the-drop.

¹⁰ See Annex 1 for details of survey work commissioned by CPRE for this project.

¹¹ Since the survey was carried out we have been informed by local CPRE volunteers that there have been significant recent improvements in the tidiness of the areas of the Sefton Coast around Crosby and Waterloo that are

All of these ‘hotspots’ are in locations that are especially valuable in environmental terms, and particularly accessible and well-used. This suggests that encouraging wider use of the Green Belt for quiet recreation – something that both CPRE and Natural England strongly believe in – will bring its own challenges in terms of educating members of the public to respect the natural environment on the edge of cities. But greater public use can also mean that areas become more self-policing, and therefore possibly less vulnerable to environmental crime and neglect.

Encouragingly, the public are prepared to do something about litter. Perhaps unsurprisingly, there was virtually unanimous (99.7%) support in the CPRE survey for making a personal commitment not to dump rubbish in rural areas. But significant numbers of respondents also indicated that they would be prepared to take further action, with 65% saying that they would be prepared to report other people for dumping rubbish; 50% saying that they would volunteer to help with clearing up the mess; and 35% saying that they would join a parish council or other group to help create a community response to fly-tipping.

Summary

The landscapes within Green Belts are varied and dynamic. They are mostly rural in character but include scattered settlements, development associated with the edges of urban areas including road and rail infrastructure, as well as former mining areas in need of regeneration. Based on the National Character Area approach, 39% of the land is maintained in a stable condition (lower than the national figure of 51%), and a further 36% is ‘diverging’ from its established character with a new character emerging (significantly higher than the national figure of 19%). 18% of the land is categorised as ‘neglected’, a slightly lower proportion than for England as a whole (20%). Only a small percentage (0.2%) is recorded as vacant, damaged or derelict. A high proportion is subject to landscape scale regeneration such as through the Community Forest programme.

The majority of the population believes Green Belt to be beautiful and rich in wildlife. A few are concerned about damaged land, litter and fly-tipping and, although there is some evidence of this in the Green Belt, it relates to a small proportion of the land and at very specific locations particularly near to main roads. A better understanding of these areas is required to appreciate the impact they have on local communities and to put in place ways to improve their quality.

Is Green Belt land achieving the land use objectives for attractive landscapes and improving damaged and derelict land?

A significant proportion of Green Belt land retains a rural and open character, but a significant proportion is diverging from its established character and action is required to prevent this land from falling into neglect in the future. Regeneration schemes such as Community Forests have helped to enhance more extensive areas of neglected land within both Green Belt and other urban fringe areas but there is more to do. A landscape scale approach is required to deliver this along with a successful business model for funding regeneration and landscape enhancement.

A more detailed investigation of landscape quality in Green Belt and urban fringe areas is needed through use of landscape character assessment and tranquillity mapping, to understand which locations need improvement.

particularly well used by the public. The Sefton Coast won a Quality Coast award in 2009 and part of the coast, at Ainsdale-on-Sea, won a Blue Flag award in 2006. Litter problems remain in some of the less used areas of this coast.



Chapter 6

Healthy natural systems

Healthy natural systems

Introduction

This section reviews the contribution Green Belt land is making to the positive land use objectives in PPG2 relating to Objective 5: securing nature conservation.

Priority habitats

The UK Biodiversity Action Plan identifies the most important habitats for nature conservation. Of those that are mapped, 13% of the area covered occur within the Green Belt (10% in the Comparator Areas), despite Green Belt covering only 12% of England's land (Table 14). There is variation between habitats. Deciduous woodland (20% of the total habitat area in Green Belt and 13% in Comparator Areas) and Lowland Heathland (36% in Green Belt and 13% in Comparator Area) are well represented whereas other habitats such as coast and uplands do not feature significantly within the Green Belt or the Comparator Areas. The lack of the latter, in particular, is unsurprising given the few large towns or cities in or directly adjoining upland areas.

Some habitats, such as deciduous woodland, are widespread across all Green Belt areas, whilst others are concentrated in few.

Protected sites

Of the 95,859 hectares of National Nature Reserves in England, just 5% are within land designated as Green Belt (3% in Comparator Areas). There is a significantly higher number of Local Nature Reserves (LNR) with 33% of the total LNR land area within Green Belt and 20% in the Comparator Area (Table 14).

In the local surveys¹², when asked to consider future uses of the Green Belt, additional nature reserves were a popular choice among the public and, although slightly less favoured among landowners, still had substantial support amongst this group in two of the three areas surveyed. While land professionals in Bristol and London strongly agreed with the statement that 'more could be done to encourage birds and wild animals' in the Green Belt (79 and 83% respectively), Merseyside showed less support (55%). Conversely, 36% of Merseyside landowners and professionals disagreed, whereas disagreement elsewhere was at less than 6%.

Sites of Special Scientific Interest

The area and condition of Sites of Special Scientific Interest within Green Belts provides a further benchmark against which to assess the value of Green Belts for nature conservation. Green Belt land accounts for only 8% of the total area of SSSI in England – 89,431 hectares as compared to 1,076,978 hectares nationally (Table 14). In terms of the condition of sites the majority are in favourable or recovering condition – 85% within Green Belt compared to 88% nationally (Table 16a). Of the hectares of SSSI destroyed or partially destroyed, 30% are within the Green Belt, but it should be noted that this involves a very small area of land (66 hectares). Overall there are fewer SSSIs and they are in a slightly poorer condition than the countryside as a whole.

¹² See Annex 1 for details of local survey work commissioned by CPRE for this project.

Figure 18 – The percentage of SSSIs in favourable or recovering condition in Green Belt areas compared to England and the urban fringe comparator areas.

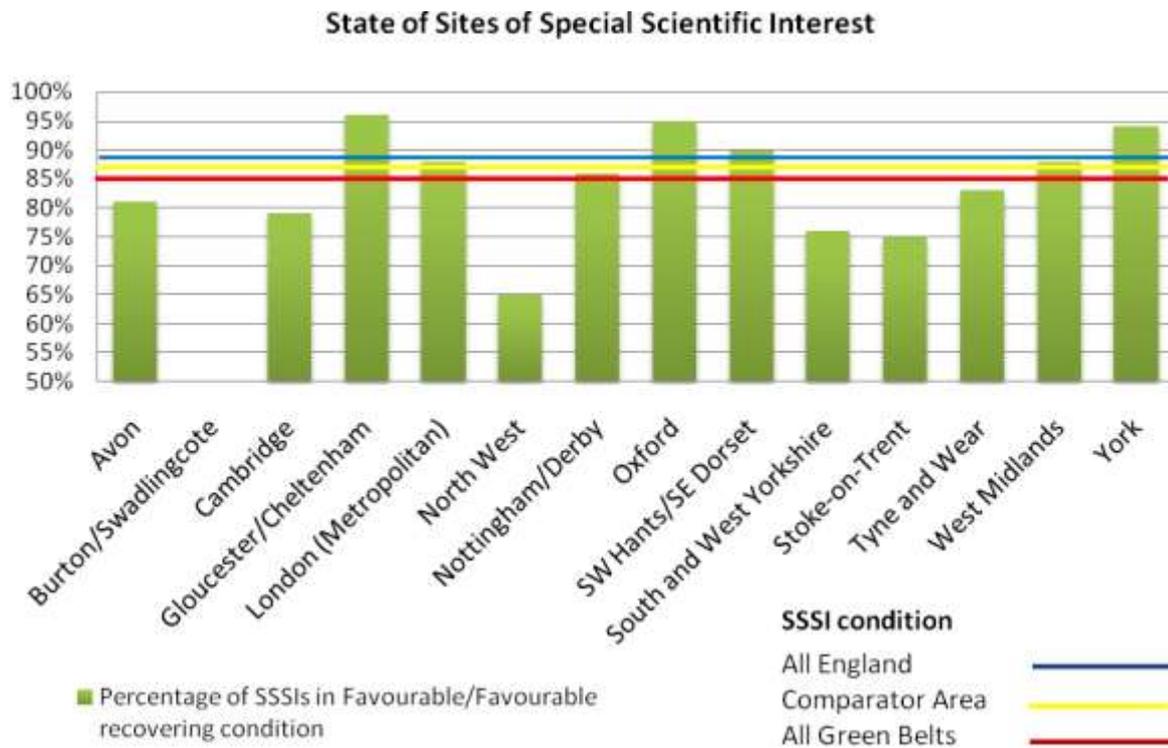
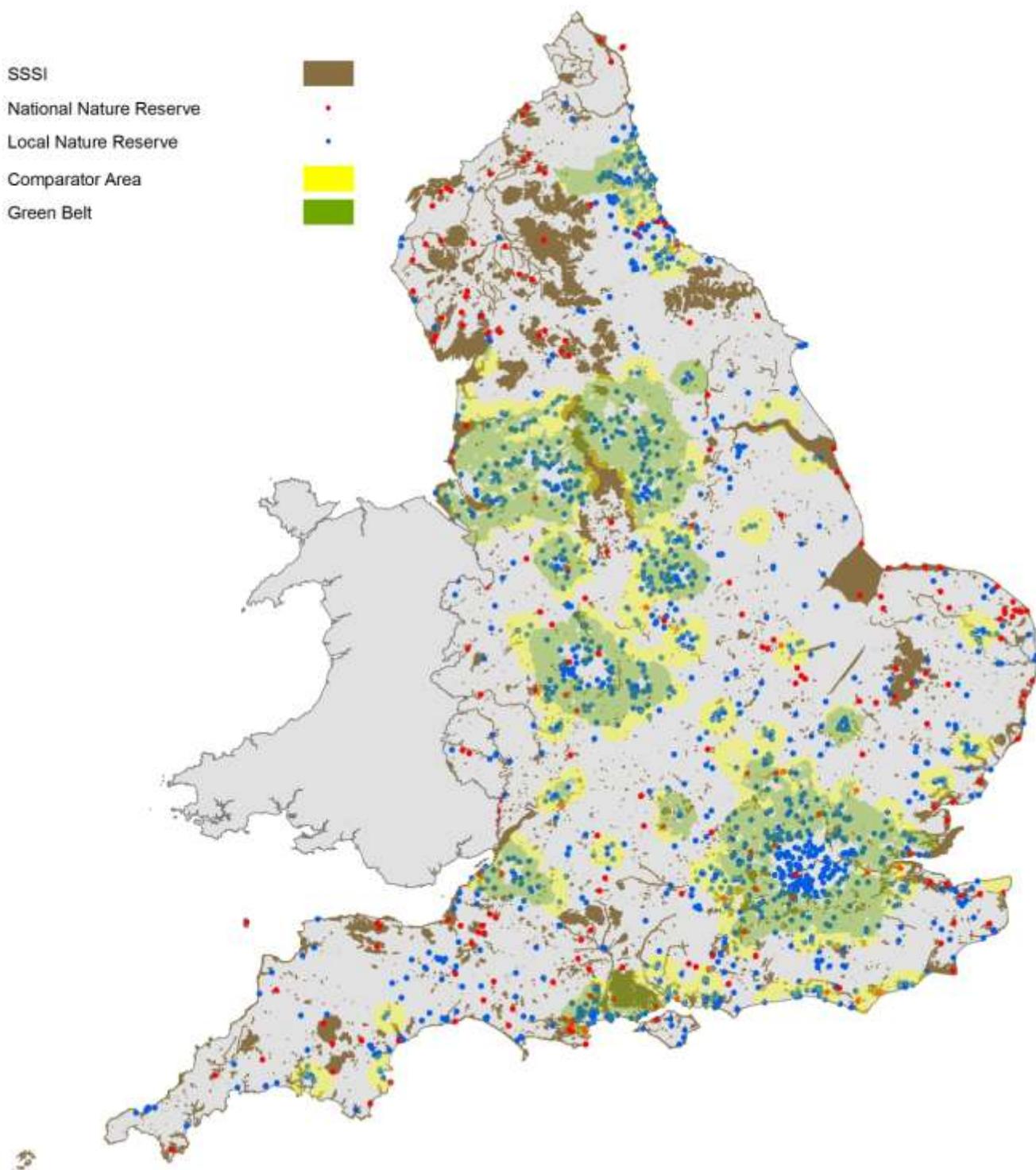


Figure 19 – Map of Green Belt and sites protected for biodiversity and geodiversity



The main threat to unfavourable SSSIs nationally is overgrazing and this is similar within both Green Belt and Comparator Areas (Table 16b). Green Belt SSSIs suffer from more under grazing (28%) compared to Comparator Areas (13%) and all of England (9%) and more inappropriate scrub control (21%, 13% and 9% respectively). Green Belt SSSIs in unfavourable condition do not suffer as much water pollution from agricultural run-off as land in other parts of England (6%, 11% and 15%).

Analysis of the remedies for dealing with the threats (Table 16c) reveal that Higher Level Stewardship through agri-environment funding is the main mechanism for improvement for Green Belt, the Comparator Areas and all England (44%, 37%, and 40%). The main difference is that 'Flood Risk

management – capital improvement schemes’ is used less often in Green Belt and Comparator Areas compared to all England (5%, 7%, 17%).

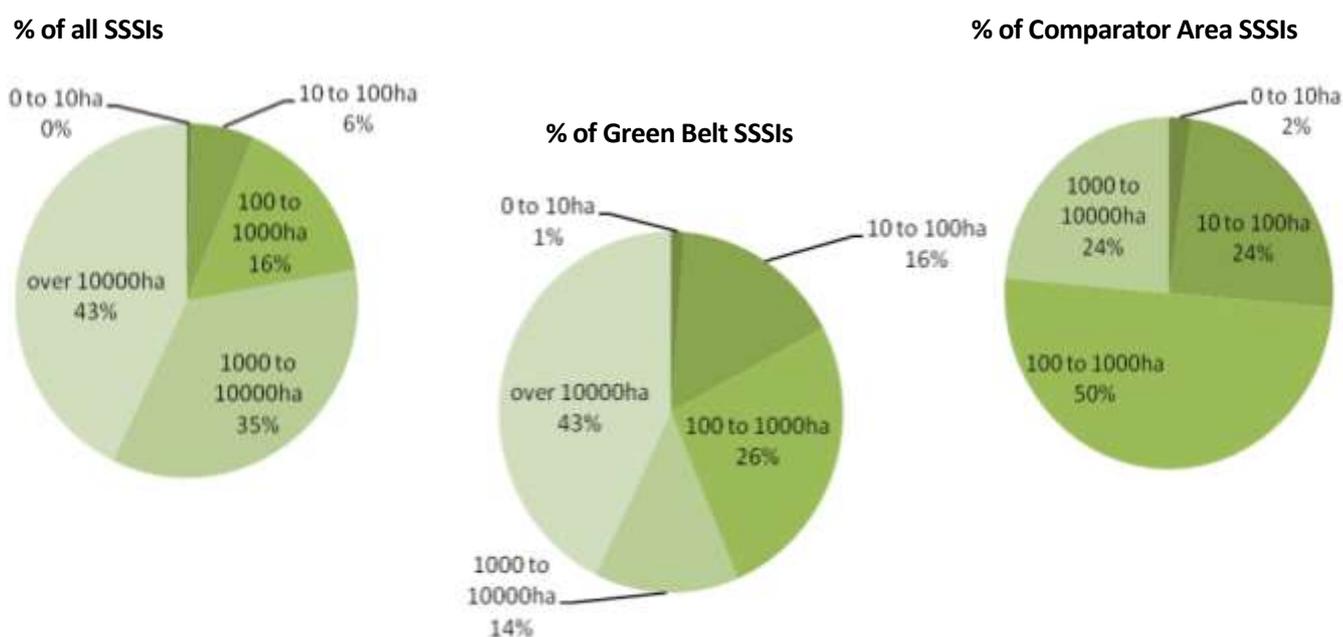
In terms of the bodies responsible for improvement of unfavourable SSSIs, by far the largest is Natural England, responsible for around 70% across Green Belt, Comparator Area and the rest of England. The next largest are the Environment Agency and the Forestry Commission (Table 16d).

When SSSIs are grouped according to size, this reveals that there is a slight tendency for smaller sites (under 100 hectares) to be within both Green Belt and the Comparator Areas, and slightly fewer larger sites (over 100 hectares), as illustrated in Figure 20 below. Analysis of the total area covered by SSSIs reveals that there is just one in Green Belt over 10,000 hectares and that this covers 43% of the Green Belt land covered by SSSIs.

Part of the explanation for the relative lack of large and/or nationally important nature conservation sites in the Green Belt may lie in the gradual fragmentation of Green Belt landscapes by both large-scale infrastructure development such as airports and motorways, and smaller scale ‘extensive residential’ development as highlighted in Chapters 3 and 5.

The United Nations Environment Programme (UNEP) has recently drawn attention to studies finding that although developed land covers only a small proportion of North America’s land base, it has a large impact on ecosystem services. For example, roads occupy just 1% of the US land area, but they alter the ecological structures and functions of about 22% or more of the land. In US regions with rapid ‘exurban’ (or extensive residential) growth, species richness and endemism diminish as urban cover increases, threatening biodiversity. The fragmentation of natural habitat threatens more than 500 endangered US wildlife species with extinction. It also provides new entry points for invasive species already introduced through other pathways¹³.

Figure 20 – Proportion of SSSIs at different sizes when compared to the total population



¹³ United Nations Environment Programme, *Global Environment Outlook GE04 – environment for development*, 2007, p.259 at Box 6.30.

Green Belt Case Study

Wildspace for a World City

‘Wildspace’ is a project that seeks to create a flagship conservation park centred around the RSPB nature reserve at Rainham Marshes.

The objective is to harness the benefits of the urban regeneration programme of London Riverside to improve the image of the area and provide an internationally celebrated ecological and leisure resource for the new and existing communities of east London.

The Wildspace Challenge

- Part was formerly MoD rifle ranges.
- Contains a large and active Landfill site.
- Virtually ‘off limits’ to Londoners for 100 years.
- A flagship project for the East London Green Grid – a spatial planning framework that encourages social and economic regeneration through the environment.



Social benefits

- Investment of over £7m from London Thames Gateway and Thurrock Development Corporations in the recognition of Wildspace being an important driver of economic regeneration.
- The establishment of 10 km of paths and cycleways in an area which has had virtually no public access for over 100 years.
- An eco-friendly Education and Environment centre and Wildspace learning zone.
- A freely accessible cafe, wildlife garden and children’s adventure play area to engage non-traditional audiences.

Environmental benefits

- A degraded and inaccessible area of Green Belt restored and enhanced.
- The natural environment placed at the centre stage of regeneration.
- Beneficial management of London’s largest area of freshwater grazing marsh.
- Exemplar restoration of a major landfill site providing 150 ha of new accessible greenspace.
- A major recycling and materials recovery facility established as part of the long-term use of the restored landfill site.



Birds in the Green Belt

Birds are used as an indicator of general biodiversity in many UK and European policy areas, based on extensive data on abundance and trends collected over the past 30 years or more. As noted in Chapter 3, most Green Belt land is in lowland rather than upland areas. An analysis was undertaken for this report¹⁴ whereby bird abundance and population trends were compared between the Green Belt, Comparator Areas and other areas of rural lowland in England over the period 1994–2008.

The analysis revealed significant differences in abundance of most of the 67 species available for these three land types. In particular, the analysis showed that many species of bird were more abundant in Green Belt than in the Comparator Areas and in other rural lowland (Table 17, summarized in Figure 21).

Figure 21 – Summary of comparison of bird species abundance and population trends between Green Belt, Comparison Areas and lowland England

	Number of bird species with higher abundance or more positive trends	Number of bird species with lower abundance or more negative trends	Number of bird species with no difference in abundance
Bird abundance (no. of birds recorded in sample squares)			
Green Belt compared to Comparator Area	20	9	38
Green Belt compared to Rural Lowland	20	12	35
Comparator Area compared to Rural Lowland England	12	19	36
Bird population trends (whether numbers are increasing or decreasing)			
Green Belt compared to Comparator Area	11	3	53
Green Belt compared to Rural Lowland	12	19	36
Comparator Area compared to lowland England	5	13	49

The species that are more abundant within Green Belt land than the Comparator Areas include the familiar blackbird, robin and chaffinch, as well as several species of conservation concern, such as mistle thrush, song thrush and starling.

¹⁴ Newson S.E., Siriwardena, G. & Chamberlain, D. 2009 A comparison of bird abundance, population trends and species richness in greenbelt, non-greenbelt urban fringe and in the wider countryside – unpublished report, British Trust for Ornithology.

Similarly, in looking at bird population trends, Green Belt has significantly more species with increasing populations than the Comparator Areas. The species with increasing populations include coot, pied wagtail and tree sparrow. There is little statistical difference in population trends between Green Belt and rural lowland, but on the Comparator Areas several species populations were doing less well compared to rural lowland.

Butterflies in the Green Belt

Butterflies are now part of the UK indicator set for assessing biodiversity and have been developed as indicators of finer scale habitat and landscape changes than birds. The UK butterfly fauna contains both habitat 'specialist'¹⁵ and 'generalist'¹⁶ species and this mix provides a range of tolerances and requirements. Butterfly populations are very sensitive to changes in weather, habitat quality and pattern of land use and make good indicators of overall quality of land. An analysis of the UK Butterfly Monitoring Scheme data¹⁷ shows a similar pattern to that of bird data: there are significant differences in population trends for individual species between Green Belt, Comparator Areas and rural lowlands (Table 18, summarized in Figure 22). These trends apply to both generalist species and habitat specialists.

The picture for Green Belt is mixed, with some species doing better than on Comparator Areas or rural lowlands and vice versa. In terms of overall numbers of species with a higher or positive trend in abundance, Green Belts appear to be more favourable locations for butterflies than the Comparator areas.

Figure 22 – Summary of comparison of butterfly species abundance and population trend between Green Belt, Comparison Areas and lowland England

	Number of butterfly species with higher abundance or more positive trend	Number of butterfly species with lower abundance or more negative trend	Number of butterfly species where no significant difference in abundance or trend
Butterfly population trends			
Green Belt compared to Comparator Area	8	4	19
Green Belt compared to Rural Lowland	7	7	17
Comparator Area compared to Lowland England	6	12	13

¹⁵ These are species reliant upon specific, semi-natural habitats and are generally regarded as vulnerable to change and declining in the UK.

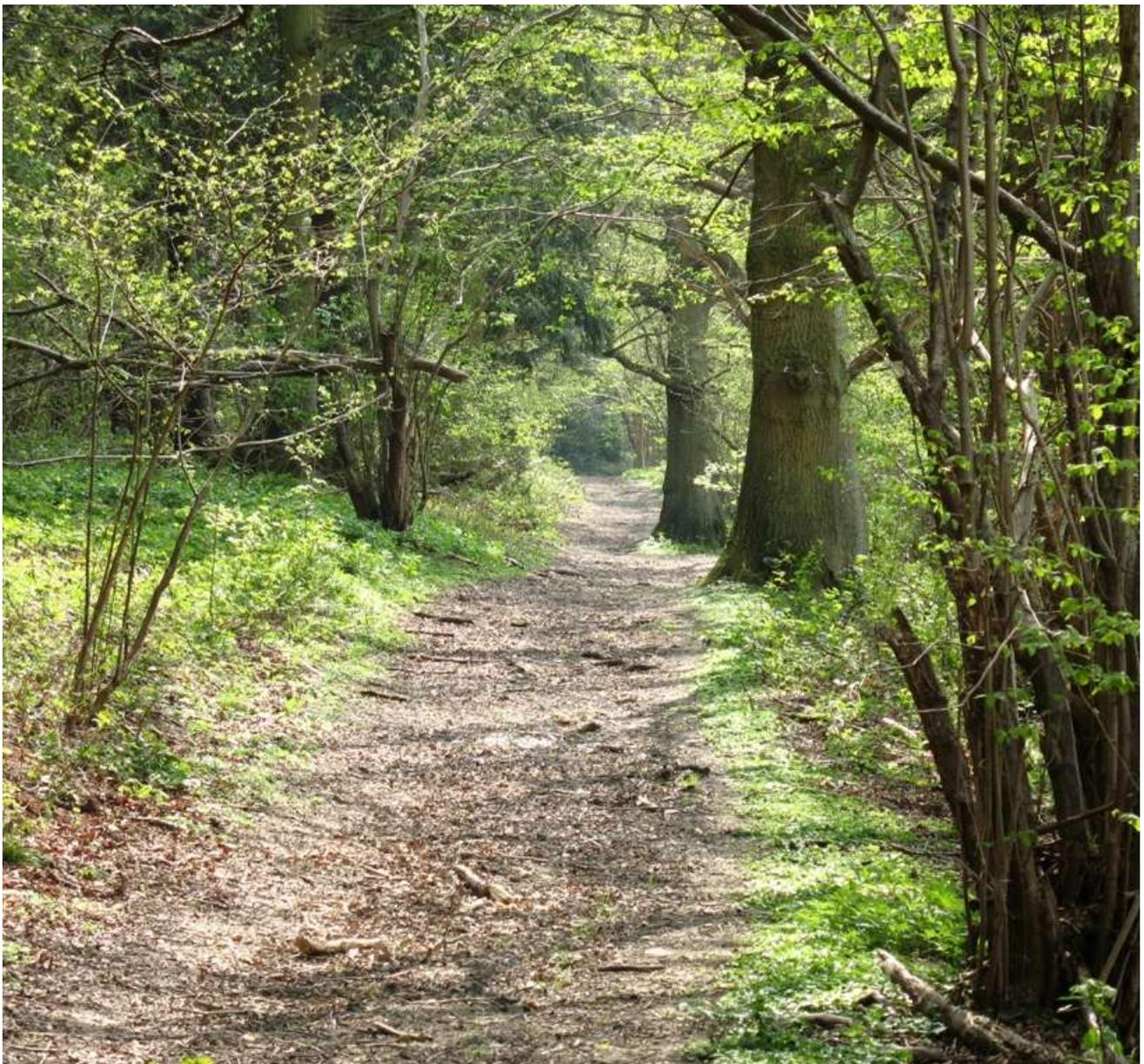
¹⁶ These are butterfly species that occur widely across the countryside and rural/urban fringe.

¹⁷ Roy, D.B & Harrower, C.A 2009 Unpublished bespoke analysis using UK Butterfly Monitoring scheme data; Centre of Ecology and Hydrology and Butterfly Conservation.

The most dramatic difference is the dark green fritillary which is increasing in Green Belt and Comparator Area compared to rural lowland. In contrast the small blue shows large increases on Comparator Areas compared to either Green Belt or rural lowland. These results need to be seen in the context of sample size and national trends but are significant within the current analysis.

Species with a negative population trend in Green Belt include habitat specialists such as the silver washed fritillary and familiar urban species that also utilise marginal habitats in the rural lowlands such as small tortoiseshell, orange tip, small copper and peacock butterflies.

All butterfly population trends need to be seen in the context of long term downward trends in the numbers of some species with wet summers depressing numbers in the past two years. The 'positive' results described here are where the decline is slower, rather than a consistent increase over baseline.



Presthoke woodland path © Natural England

Pollution incidents in Green Belt

Data supplied by the Environment Agency (Table 19) suggests that pollution is a significant concern in Green Belt and the Comparator Areas, and is an illustration of the particular extent of urban intrusion into these areas. Across England, recorded incidences of twelve different types of pollution between 2001 and 2008 were proportionally higher in Green Belt areas (19% of all incidents on 12% of the land) and Comparator Areas (14% on 10% of the land) for all categories including agricultural waste, contaminated water and sewage. The majority of the pollution incidents recorded on Green Belt land were in South and West Yorkshire (523 incidents or 6% of total) London (Metropolitan) (5%) the North West (3%) and the West Midlands (2%).

Public perceptions of nature in Green Belt

Green Belts are seen by the public as a place where wildlife is protected and the nature value of Green Belts appear to be both an important part of the public experience and one of the higher priorities for the future in terms of the services provided by Green Belt land. Over 80% of the public and landowners responding to the local Green Belt surveys by CPRE agreed with the statement: 'there are places in the countryside where plenty of birds and wildlife can be seen'. At least 86% of all respondents wanted to see more wildlife. 43% of the respondents to the Natural England survey wanted to see more nature reserves on Green Belt land, rating this higher than any other option given, including farming, new parks, or woodlands.

Summary

The value of Green Belt for nature conservation can be assessed on the extent and condition of priority habitats, protected sites and species. Priority habitats are well represented across Green Belt land although there are fewer Sites of Special Scientific Interest and they are in a less favourable condition than much of England. SSSIs in Green Belt areas tend to suffer from slightly different risks with more under grazing and inappropriate scrub control, and less from water pollution from agricultural run-off.

Some species are surviving well and better than in other parts of England including birds such as the mistle thrush, song thrush, starling, and butterflies such as the dark green fritillary.

However, major pollution incidents such as agricultural waste discharge and atmospheric emissions do appear to be a particular problem in the Green Belt.

Is Green Belt land achieving the land use objectives for nature conservation?

Green Belt land is contributing to the healthy ecosystems which underpin many natural processes supporting a range of services including pollination, soil fertility, flood defence, air filtration and carbon capture and storage. Without the Green Belt designation it is likely that a proportion of this land would have been lost to urban development and associated infrastructure. Green Belt landscapes have been fragmented by development in a number of locations over time, however, and there may be a correlation between this and the relative lack of large and/or nationally important nature conservation sites. Green Belt land needs to be recognised as an integral part of ecological networks, forming healthy, functioning ecosystems to benefit wildlife and the people who live in adjacent towns and cities. A more detailed understanding is needed of areas where Green Belt landscapes are fragmented or disturbed by urban development.



Chapter 7

Thriving farming and forestry

Thriving farming and forestry

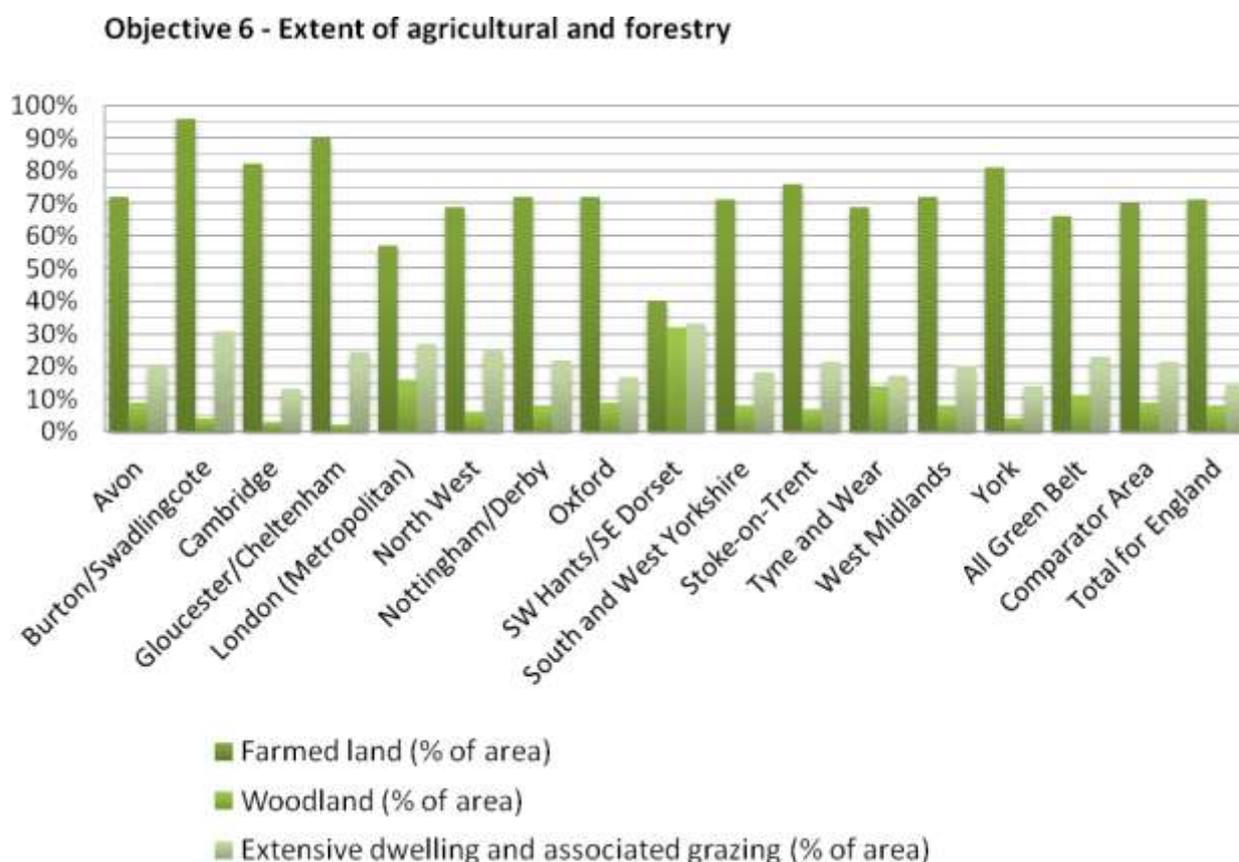
Introduction

This chapter reviews the contribution Green Belt land is making to the positive land use objectives in PPG2 relating to Objective 6: retaining agriculture, forestry and related uses.

Agricultural land

A high proportion of Green Belt is classified as being in agricultural production with 66% (just over a million hectares) recorded as farm land for EU subsidy purposes (Table 20a). This is slightly less than the figures for England as a whole (71%) and the Comparator Areas (70%). This does not indicate that all of this land is in productive agricultural use. Farming in the Green Belt is often seen as a particularly marginal economic activity as it can be more likely to face a range of additional problems including damage due to trespass, vandalism and fly tipping, which give rise to additional operating costs¹⁸. These problems in turn reflect wider societal issues.

Figure 23 – Extent of agriculture and forestry in the Green Belt



Data source: Agricultural land from Rural Land Registry; Woodland from National Woodland Inventory; Extensive dwellings and associated grazing from University of Sheffield.

¹⁸ See, for example, Country Landowners & Business Association (CLA), *A Living, Working Green Belt* (2002), Royal Town Planning Institute, *Modernising Green Belts – A Discussion Paper* (2000), and London Assembly: *Cultivating the Capital: Food growing and the planning system in London*, January 2010, p.31.

The number of farm holdings within the Green Belt has continued to decline, reflecting the overall national trend (Table 20b). Of the 208,166 registered agricultural holdings (both main and minor) in England, 14% are within Green Belt land. Analysis of the holding size reveals that within the Green Belt proportionally more holdings are below 100 hectares. The profile of holdings in the Comparator Areas does not vary in the same way.

The profile of holding tenure in the Green Belt is similar compared to the country as a whole. Within the Green Belt 63% of holdings are classed as owned and 14% as rented (the rest being mixed or of unknown tenure) compared to 64% and 13% nationally (Table 21).

In terms of the farmed environment, with a few exceptions, the proportion of land given over to the major farming types – cereals, dairy, grazing and mixed in Green Belt is broadly similar to the wider countryside (Table 22). Overall there are fewer agricultural animals per area of farmed land within the Green Belt compared to the national figure, but there is significant difference between types of livestock (Table 23). Since 1990 compared to other parts of England there has been a significant decline in specialist pig and poultry farming. Within the Green Belt the density of ‘other’ livestock (horses, goats, farmed deer, donkeys and llamas) is almost twice as high: 0.08 head per hectare compared to 0.05. The density of cattle is similar whilst densities of sheep, pigs and poultry are lower within the Green Belt.

Quality of agricultural land

Land classified as agricultural is graded to indicate the quality of the land in terms of its use for farming¹⁹. The proportion of both Grade 1 and Grade 2 agricultural land (the best and most versatile²⁰) in the Green Belt is 12% which is directly in proportion to the area of land Green Belt covers (Table 24).

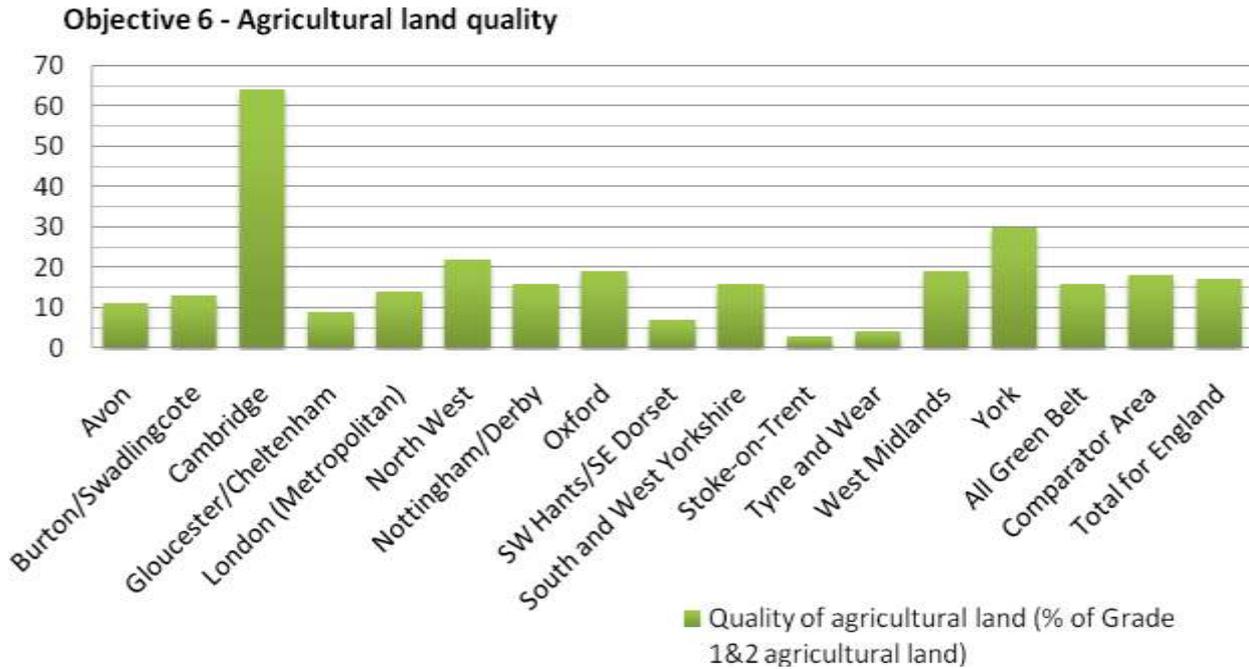
A particular concentration of this land is found in Cambridge (64%), York (30%) and the North West (22%). In the last of these the land is concentrated in an area to the north of Liverpool²¹. The Green Belt has proportionally slightly more land of Grade 3 and 4 quality. The Comparator Area follows a similar pattern although has less Grade 1 land than other areas (7%).

¹⁹ Agricultural Land Classification data.

²⁰ For the purposes of this study we have not included Grade 3a agricultural land within the figures for best and most versatile land, although it falls within the definition of ‘best and most versatile’ given in paragraph 28 of Planning Policy Statement 7. It has not been possible to disaggregate figures for Grade 3a land (which is considered best and most versatile) from Grade 3b (which is not considered best and most versatile).

²¹ See mapping available on Multi-Agency Geographical Information for the Countryside (www.magic.gov.uk).

Figure 24 – Agricultural land quality



Agri-environment schemes

Agri-environment schemes provide financial support for environmentally beneficial land management. They were first introduced in the late 1980's and the original Classic schemes²² have now been replaced by the Environmental Stewardship Scheme²³.

The thinking behind the schemes reflects the wider shift in agricultural policy from supporting production towards achieving a range of environmentally beneficial outcomes. It also assumes that agricultural land should be 'multifunctional' or capable of integrating different uses such as food production, nature conservation and/or public access into the same space and over time²⁴.

Agricultural land can be entered into Environmental Stewardship at two levels: Entry Level Stewardship (ELS), including Organic Entry Level, is aimed at delivering environmental benefits through widespread uptake of some basic management options, whilst Higher Level Stewardship (HLS) provides a more targeted and tailored approach involving more complex environmental management and greater environmental benefits in return for payment. HLS agreements cover only 16% of the land in agri-environment schemes, but the financial value of the agreements is higher. Figure 25, below, shows the distribution of Environmental Stewardship funding and Green Belt distribution.

²² Agreements under the original schemes, such as Countryside Stewardship or Environmentally Sensitive Areas will be in place until 2015 when the last expires or is renewed.

²³ A funding scheme using European Union agricultural funds to support farmers in meeting a range of environmental objectives to improve biodiversity, protect historic heritage and landscapes. It also supports access to the countryside.

²⁴ Gallent N, Juntti, S, Kidd, S & Shaw, D: *Introduction to Rural Planning*, Routledge, 2008, p.22-23.

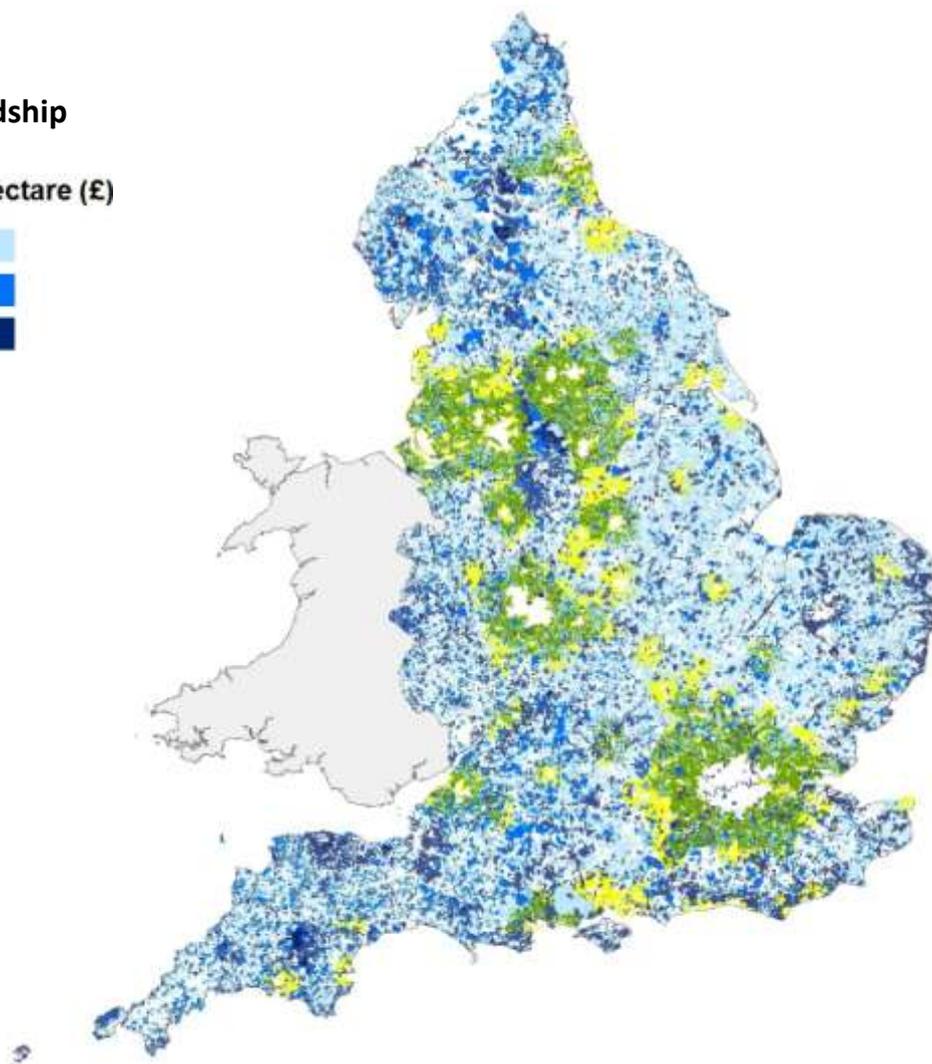
**Figure 25 –
Area of land subject to
Environmental Stewardship**

Cost of agreement per hectare (£)

0.00 - 30.00

31.00 - 60.00

>61.00



The proportion of Utilisable Agricultural Area (UAA) which is Green Belt land and managed under agri-environment schemes is 53%, considerably lower than the 67% for all England and also less than the 60% coverage of Comparator Areas (Table 25). There are variations between individual Green Belts with 73% of Cambridge and 70% of Oxford with agreements compared to just 40% of Stoke-on-Trent and 44% of South and West Yorkshire. Overall 10% of Environmental Stewardship agreements are within Green Belt indicating a slightly lower uptake compared to the national picture. Nine percent are within the Comparator Areas. Green Belt has a much higher proportion of land subject to HLS agreements (21% within Green Belt) but only 10% of the ELS. The proportion of land subject to the more recently introduced Environmental Stewardship scheme is 39% for the whole of England, 31% of Green Belt and 35% of the Comparator Areas.

The amount of land subject to Higher Level Stewardship agreements, which necessarily involve a long-term commitment to the land, is significant in terms of the need for Green Belt boundaries to be 'permanent' as PPG2 requires. The idea that 'permanence' of Green Belt should be something longer than the next plan review (see Chapter 1) is relevant to the former Ministry of Agriculture, Fisheries and Food's stipulation that it would not invest in agricultural land that had no guarantee of protection for more than 10 years²⁵.

²⁵ Martin Elson, 'Green Belts: Conflict Mediation on the Urban Fringe', Heinemann 1986

Figure 26 – Percentage of Utilisable Agricultural Area subject to Agri-environment schemes in the Green Belt compared to all England and urban fringe comparator areas.

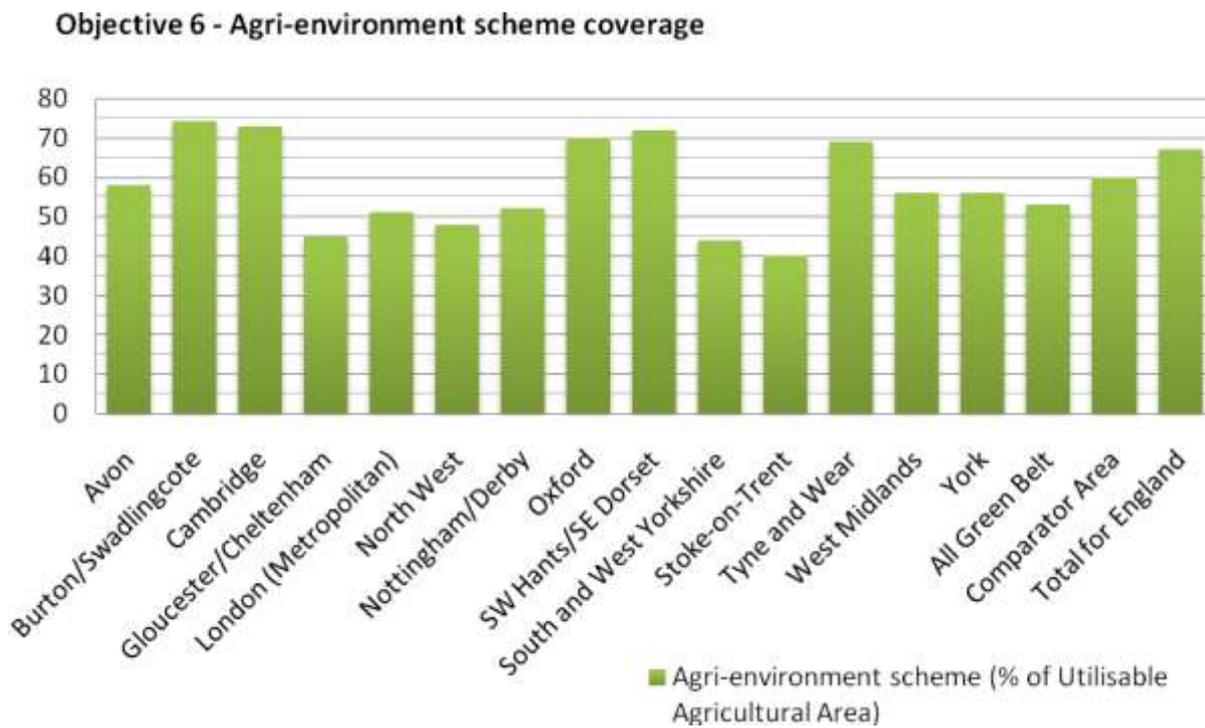
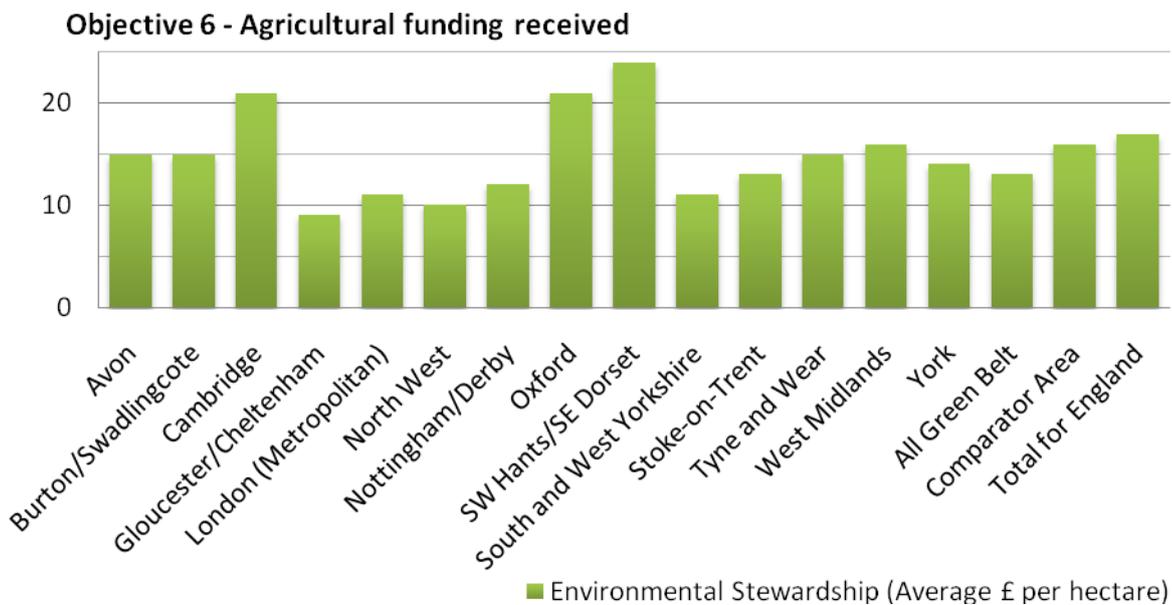


Figure 27 – The amount of Green Belt land covered by Environmental Stewardship schemes compared to all England and the urban fringe comparator areas.



The amount of money provided to Green Belt areas through Environmental Stewardship also tends to be lower than for all England. The average spend per hectare²⁶ for England is £17, for Green Belt it is £13 and for the Comparator Area £16. The figures for all Green Belt hide wide variation with more than average levels of funding attracted to Hampshire and Dorset (£24), Oxford and Cambridge (both £21)



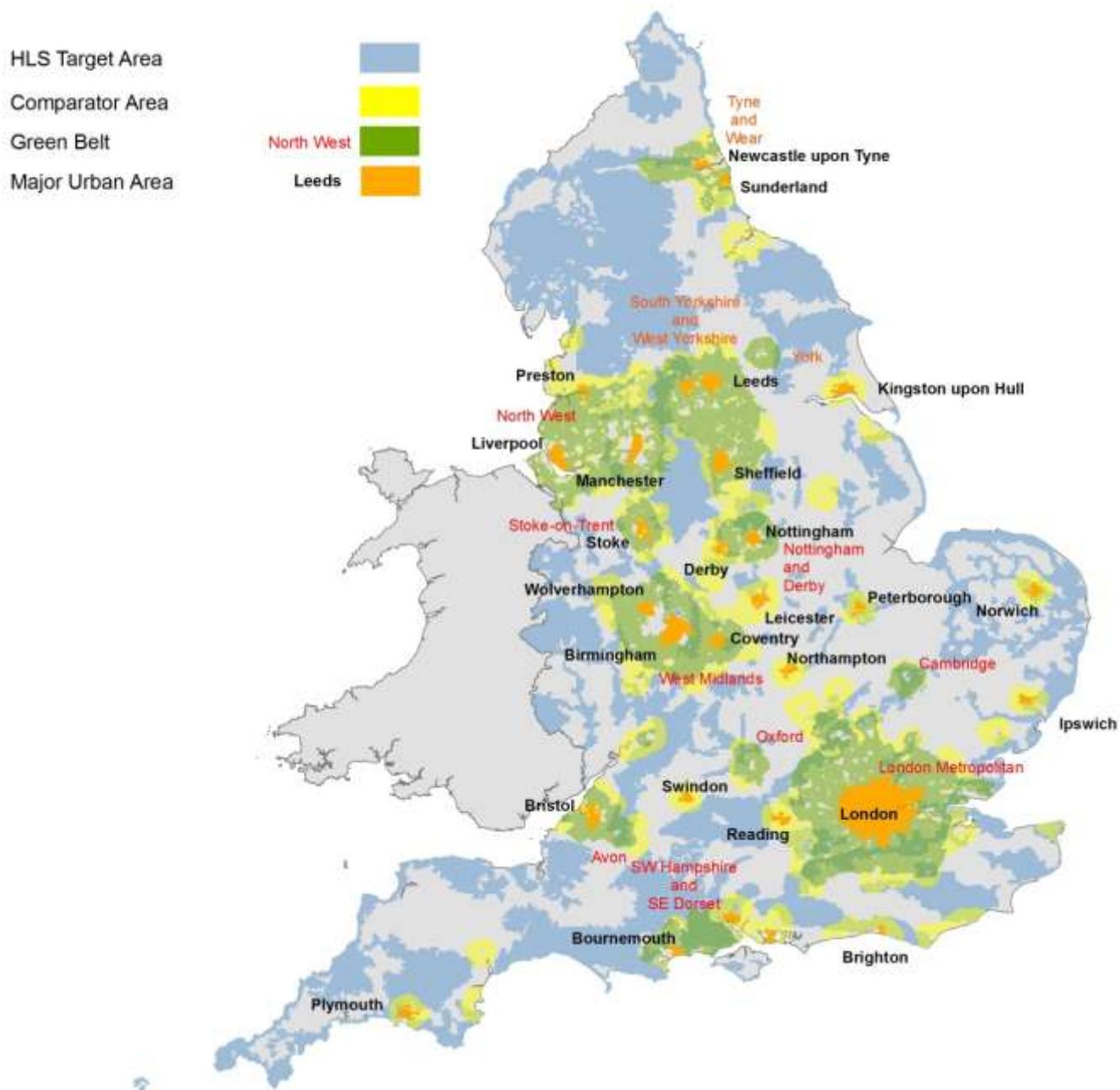
HLS also offers an option for farmers to apply for funding to support educational visits. 14% of these are taking place in Green Belt areas and 11% in comparator areas (Table 10).

Targeting agri-environment schemes

Natural England has identified priority areas for delivery of the HLS scheme's multiple objectives (Figure 28). The target areas cover 22% of Green Belt land, 31% of the Comparator Areas and 36% of England (Table 26). Target areas have been defined by a systematic and integrated analysis of a range of datasets describing environmental quality and potential across all of the scheme objectives; for example data on habitat distribution, ranges of species of conservation concern, access provision, historic environment features and resource protection. The target areas therefore represent a holistic assessment of environmental quality and potential. The lower coverage within Green Belt areas suggests lower environmental quality and potential for schemes to deliver outcomes. There are significant variations between individual areas.

²⁶ This is the total spend divided by the total area

Figure 28 – Green Belt and Higher Level Stewardship targeting

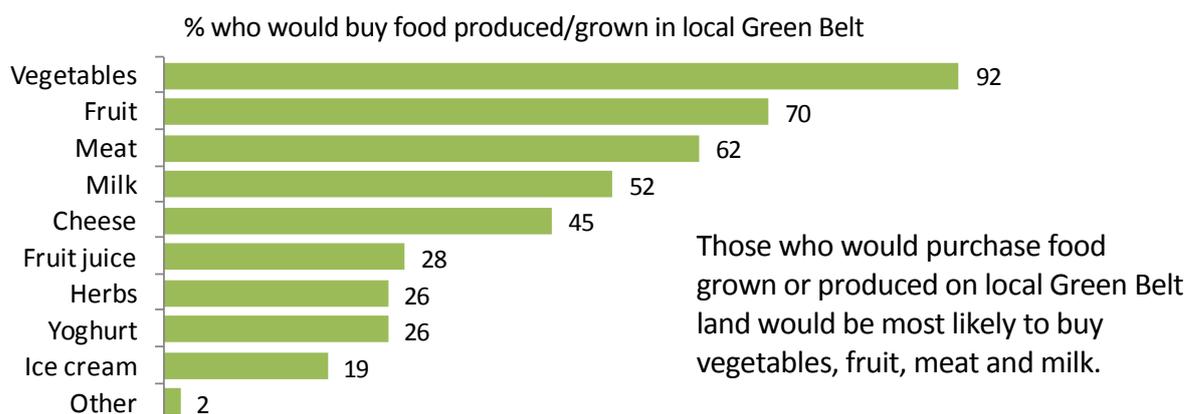


Public, land manager and professional views on agriculture and forestry

The national survey work carried out for this project found that there is strong public support for buying more food produced in the Green Belt which surrounds them. Eighty percent of respondents said that they would buy food grown or produced in the Green Belt rather than food produced elsewhere. Interest levels were highest amongst those aged 35 to 64 and those in the AB socio-economic groups. Of the activities people would like to undertake more of in the future, buying food grown or produced in the Green Belt was supported by 21% and was third of eleven options behind visiting for a day out and quiet recreation.

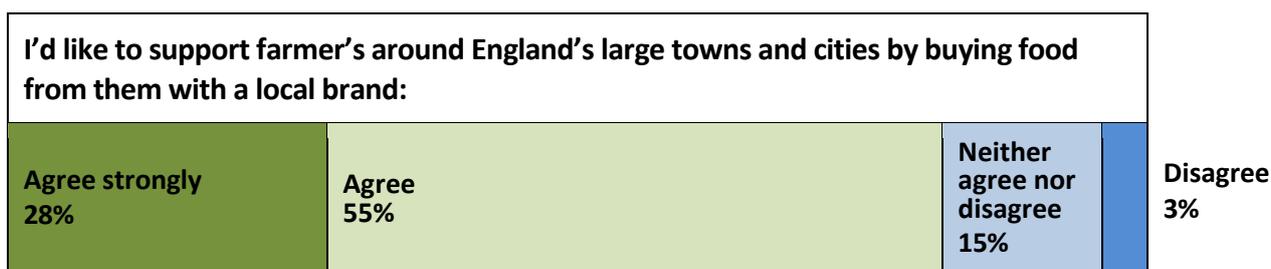
In terms of the type of food that these people would buy, vegetables were by far the most popular option at 92%. The local surveys showed that in addition to vegetables the opportunity to buy more local fruit, herbs and meat would also be welcomed.

Figure 29 – The types of food produced in a local Green Belt that respondents would be most interested in buying?



Respondents to the national survey were also asked to agree or disagree with a statement about supporting farmers by buying food grown in the Green Belt and 83% agreed. Those that strongly agreed were mostly aged over 55, in socio-economic group C1 and living in the South East.

Figure 30 – Attitudes expressed in surveys to buying local food from farmers in the Green Belt



The local surveys of land managers and other professionals revealed that over two thirds of landowners agreed that marketing food grown or produced in the Green Belt with a local or 'Green Belt' brand had business potential.

Figure 31 – Land manager and professionals views on potential to market food grown in the Green Belt with a Green Belt brand.

		strongly agree	agree	no opinion	disagree	response count
I think there is business potential in marketing or selling food branded as being from the Green Belt or the countryside around X	London	12 (41.4%)	8 (27.6%)	5 (17.2)	4 (13.8%)	29
	Bristol	4 (21.1%)	8 (42.1%)	3 (15.8%)	4 (21.1%)	19
	Mersey	4 (36.4%)	3 (27.3%)	1 (9.1%)	3 (27.3%)	11

The national survey sought responses to three statements about future uses in the countryside around towns generally (not just Green Belts) which relate to agricultural and forestry land (Figure 32).

Figure 32 – Attitudes to changes in land use in the urban fringe

More trees should be planted around England’s towns and cities on farmland that is currently under used:		
Agree 79%	Disagree 6%	Neither 15%
If farmland around England’s towns and cities isn’t being fully used, then it should be used to grow food to feed the people who live in the local towns and cities:		
Agree 78%	4%	Neither 18%
I’d like to see more birds and wild animals in the countryside around England’s large towns and cities:		
Agree 79%	4%	Neither 17%

These findings suggest that the public support the multifunctional ethos of Environmental Stewardship schemes as explained above and would like to see the countryside around towns become more multifunctional, combining agricultural production with other public benefits.

The suggestion of community growing schemes was also put forward for consideration in the local surveys. This received strong support from the public and more than two thirds of land managers and other professionals agreed it was a good idea. However, few land managers were prepared to offer land for such as scheme, preferring instead to offer support in other ways.

Farm diversification in the Green Belt

Concerns about diversification were raised by a number of the landowners and land managers surveyed or interviewed for this project. Farming in the UK and elsewhere has had to address the issue of falling economic returns for some years²⁷.

Green Belt planning policies are also believed by some to hinder development that enables farmers to diversify their activity²⁸. The evidence available, however, paints a more complicated picture, and suggests that Green Belt locations may in fact be encouraging rather than hindering diversification. Nationally, according to data from 2004, 46% of farms have diversified into non-farming enterprises. In 1991 a study in the West Midlands found that two thirds of diversified farms in the region were located in Green Belt areas within 5 km of Birmingham and Coventry²⁹. More recently, a 2005 survey for the London Development Agency (LDA) of farmers in the Green Belt area within the M25 found that, although planning was perceived as a barrier to further diversification, diversified enterprises accounted for almost a third of farm income, much higher than elsewhere in the country³⁰.

Research carried out for this project by the University of Sheffield also suggests that agricultural diversification is particularly prevalent in Green Belt areas. Farm shops are an important means for farmers to tap into a market for their produce, and were highlighted in a January 2010 report by the

²⁷ N Gallent, J Andersson, & M Bianconi, *Planning on the Edge: The Context for Planning at the Rural-Urban Fringe*, Routledge 2006, p.107, DEFRA 2004/5 Farm Business Survey figures.

²⁸ CLA 2002.

²⁹ Gallent et al 2006, p.107.

³⁰ ADAS, *Farming in London’s Green Belt*, 2005, p.7 at 5.7.

London Assembly, which called for more support for agriculture in Green Belt areas within London³¹. Our research found that there are 50% more farm shops per 1,000 households in the Green Belt than in the comparator areas, and five times more per 1,000 households than in the rest of rural England (Table 9).



Newton St Loe from the South. © Nick Mould

The Duchy of Cornwall's estate to the south west of Bath is an example of landowners and land managers diversifying their holdings in the Green Belt to host a wide range of activities including tourism accommodation and offices for small businesses, while continuing to farm to high standards.

The evidence from a range of studies indicates that few farm diversification activities relate to benefits to the environment and people. In urban fringe areas (including Green Belt land), diversification is less likely to take the form of recreation or tourism and more likely to involve offices, haulage, storage or manufacturing³². Similarly the LDA study found that respondents saw limited potential for diversifying into more sustainable land management practices or environmental improvements³³. The survey work carried out for this review shows, however, a growing level of public interest and potential support for activities that make use of Green Belt land in an environmentally sustainable manner, such as local food production, re-wilding, and educational visits, but the landowner survey responses indicate that they are not confident of the practicalities and viability of diversifying in this way.

³¹ Greater London Assembly, *Cultivating the Capital: Food growing and the planning system in London*, January 2010, p.23 and 28/9. Accessed from www.london.gov.uk on 11 January 2010.

³² Land Use Consultants with the University of the West of England and the Royal Agricultural College *The Implementation of National Planning Policy Guidance (PPG7) in Relation to the Diversification of Farm Businesses*, DTLR 2001.

³³ ADAS 2005, p.13.

Green Belt Case Study

The Coton Countryside Reserve Project is a new and innovative wildlife and farm reserve being created by 'Cambridge Past, Present & Future' in the west of Cambridge's Green Belt. Starting in 2004, the project is demonstrating how a working farm can provide greater ecological diversity and also provide improved public access.

In the 1930s Cambridge PPF purchased farm land on the west edge of Cambridge to prevent the sprawl of the city in what is now Green Belt Land. In 2003 planning permission was granted for the Coton Countryside Reserve that comprises of a 120 ha farm, currently tenanted by Cambridge University Farm. The Reserve attracted funding from a number of sources including central government, local authorities, landfill tax and local people and companies. The countryside reserve has a Countryside Stewardship Agreement with Natural England.

The Project is already providing

- More diverse wildlife habitats including woodlands, hedges, hay meadows and an orchard.
- A change in farming practices to provide greater wildlife enhancement.
- New access routes for those on foot, wheel or hoof.
- New disabled access routes.
- Linkages with adjacent public routes.
- Volunteering opportunities.
- Links to the health agenda by encouraging more people to access their local countryside and engage in exercise and sport.
- Education and community benefits for local people through the volunteering and events programme.

And the future?

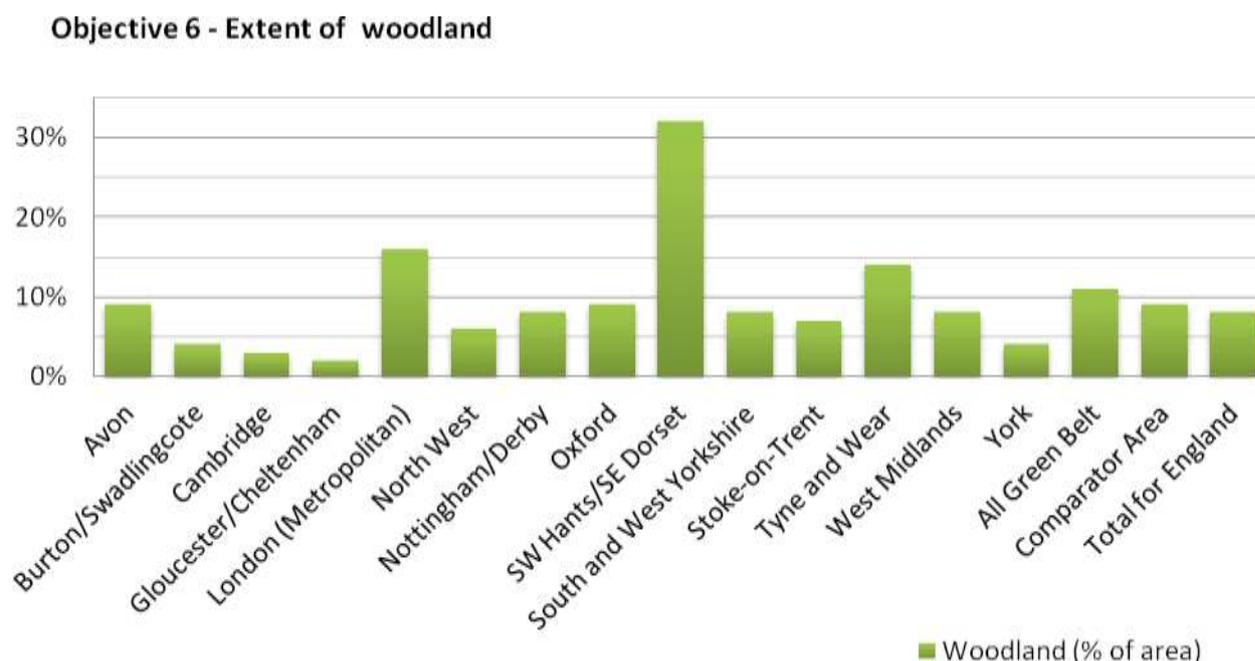
- A Reserve Centre and additional signage.
- New rustic seating suitable for less mobile visitors and an informal fitness trail.
- Further access links to Coton village and improved connection with the city including sustainable transport links.
- Creation of wildlife management plans.
- Further habitat improvements – especially the riverine corridor and other wetland habitats.
- A Farm Ranger to help with environmental management and educational activities.



Forestry land

The National Woodland Inventory records 11% of Green Belt as woodland. For all England woodland cover is 8% and for the Comparator Areas it is 9%. The coverage varies considerably between Green Belts with the most woodland found in the combined South West Hampshire and South East Dorset Green Belt (32%)³⁴, London (Metropolitan) (17%), and Tyne and Wear (14%). The highest proportion of this woodland is broadleaved (Table 27 and Figure 33) and the Green Belt has a high share of coppice woodland with 19% of the total coppice in England found in the Green Belt and 17% in the Comparator Areas. The vast majority of this is in the London (Metropolitan) Green Belt (Figure 34).

Figure 33 – Percentage of Green Belt land with woodland



Community Forests

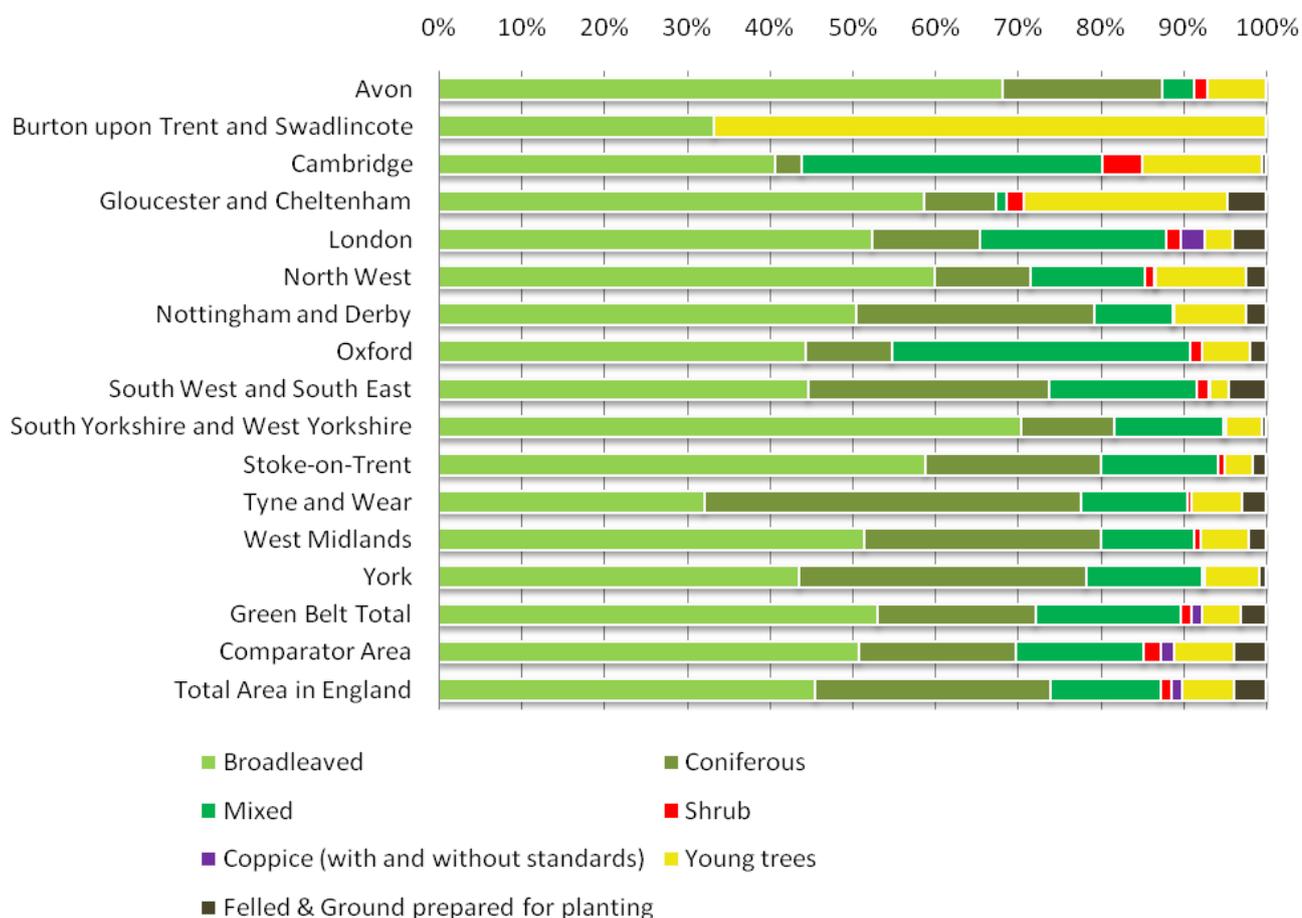
Community Forests aim to deliver urban, economic and social benefits by revitalizing derelict land to create high quality environment for millions of people. There are twelve Community Forests across England covering nearly 500,000 hectares of land which is just under 4% of England (Figure 35). The founding basis for each Forest is a government approved forest plan – a 30 year vision of landscape scale improvement. Although there is a focus on planting more trees in the areas, the areas will have a variety of land cover types and uses apart from forestry. The Community Forest programme, managed by the Forestry Commission, is a partnership of public, private and voluntary sector with a remit to cover a specified area of land, most (but not all) of which is classed as being in undeveloped use. Although the areas are not all forested there is a focus on creating woodland on land considered derelict or previously developed, while keeping good quality agricultural land in agricultural use. Such woodland has multiple benefits for the public in terms of an attractive setting for recreation and an absorber of urban heat, but can also be used for purposes of nature conservation, school field study, and fuel, for example.

Six Green Belts have Community Forests and in total these cover over 200,000 hectares which is 41% of the total Green Belt land area. A further 18% of Community Forests lie within the Comparator Areas. Of

³⁴ Includes the New Forest which is no longer Green Belt land

the six Green Belts with Community Forest, Avon has the largest proportion of land covered (53%), followed by Nottingham and Derby (36%) and the North West (30%) (Table 28).

Figure 34 – Woodland types in Green Belt areas



For more than a quarter of a century Community Forests have been a key mechanism for regenerating urban fringe areas and a recent evaluation found that they had been successful in improving Green Belt land that they covered³⁵. A number of areas of the Green Belt which historically contained extractive or other industries, such as Lancashire, South Staffordshire, South Yorkshire, and the eastern fringe of London, have been significantly transformed with the establishment of the Community Forests and other land reclamation initiatives.

Despite this, the programme faces significant challenges. Community Forests are expected to become more independent of central Government funding. The work of the Community Forests is long-term and achievements are often not readily visible and this has led to difficulties in maintaining support from partners³⁶. A case in point is the Forest of Avon, whose remit covers the countryside around Bristol. At the time of writing the Forest had been forced to wind up its partnership due to the withdrawal of support from local authorities in the region.

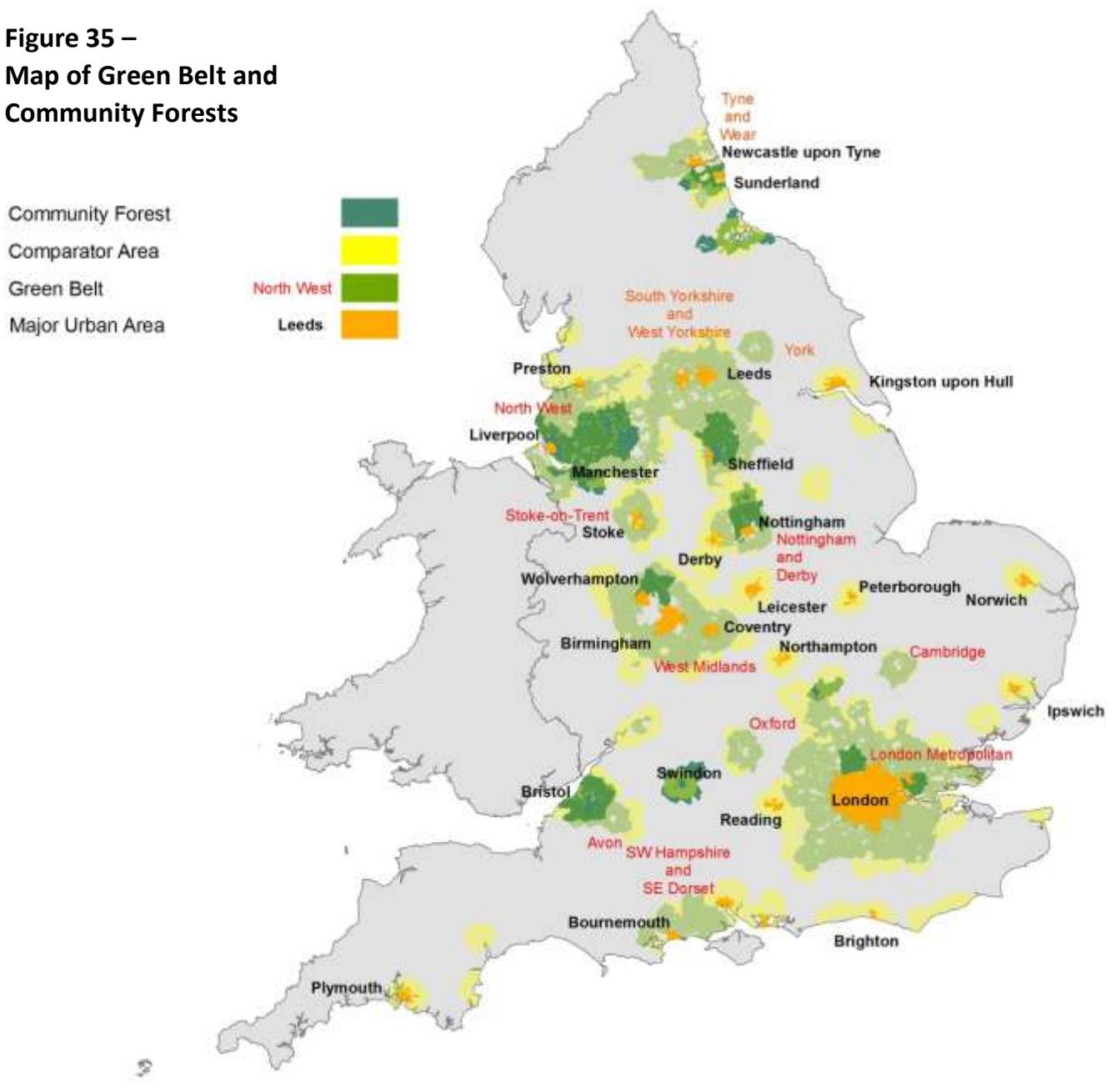
³⁵ Land Use Consultants with SQW: Evaluation of the Community Forest Programme, final report for Countryside Agency, March 2005, paragraphs 3.5 to 3.13

³⁶ Land Use Consultants with SQW 2005, paragraph 3.13.

Community Forests – Headline achievements ³⁷

- More than 27,000 hectares of existing woodland brought under management
- Over 10,000 hectares of new woodland planted
- 12,000 hectares of other habitats created or improved
- 1,200 kilometres of hedgerows planted or restored
- 16,000 hectares of woods and greenspace opened up for recreation and leisure
- More than 4,000 kilometres of recreational routes restored and created
- Many thousands of local events and activities
- Over £175 million of new investment in creating better places

**Figure 35 –
Map of Green Belt and
Community Forests**



³⁷ Quality of place, Quality of life: England's Community Forests, http://www.communityforest.org.uk/resources/qop_qol.pdf

Encouragingly, however, a significant proportion of the public appear to be prepared to get involved in the work of either the Community Forests or the Country Parks (see Chapter 4). The three local surveys revealed that between 70 and 90% of the public had heard of the Community Forest in their area, and over 60% of respondents (600 people) were willing to either become further involved in their local Community Forest or Country Park, or to maintain their existing involvement. This suggests that involving the Community Forests more in the planning process, such as through the preparation of a Green Belt Management Strategy, could help to gain the public support they need to sustain their activities.

Alongside Community Forests, significant work is being done by non-governmental organisations. The Woodland Trust has embarked on a major project in the Green Belt near St Albans in Hertfordshire, aiming to plant 600,000 trees within 15 miles of two million people³⁸.

Summary

The extent of agricultural and forestry land remains high in Green Belt and overall 93% remains undeveloped. A significant area (23%, compared to 14% for England) of land in the Green Belt is neither registered for agricultural use nor is it woodland. This land is made up of such uses as small paddocks, small holdings and extensive gardens.

The majority of Green Belt is categorised as farmed land or woodland. In terms of farm type and quality of land it is similar to much of England, although with a slight overall tendency towards smaller holdings and less mainstream activities. The quality of agricultural land in the Green Belt matches the pattern across the rest of England but with vast differences between Green Belt areas. The proportion of Green Belt land subject to agri-environment schemes is lower than for all England (53% of Utilisable Agricultural Area compared to 67% in England and 60% of the Comparator Area). The funds invested in Green Belt through agri-environment schemes are slightly lower compared to the rest of England but again with big differences between Green Belt areas. The evidence suggests that planning controls have not impacted on the ability to diversify within the Green Belt.

11% of the Green Belt is woodland, a significantly higher proportion than for the Comparator Areas or England as a whole. Half of the twelve Community Forests in England coincide with Green Belt areas and Green Belt land accounts for 41% of the total area of Community Forest. These have provided a way of managing and regenerating areas, particularly those affected by former extractive industries, and have brought together partners to attract investment to the areas.

Is Green Belt land achieving the land use objectives for agriculture and forestry?

Overall the extent of agricultural and forestry land remains high in Green Belt areas which suggests the objective is being achieved. There are doubts about the productiveness of some of the land classified as undeveloped and there are big differences between the Green Belt areas in this regard. The national and local surveys undertaken for this review revealed that the public are interested in buying food produced locally in the Green Belt and many would like to see more trees planted and more locally grown food in the areas around towns and cities. A significant number would also like to be more involved with their local Community Forest or Country Park. With the new challenges of climate change and population growth Green Belt land could play a more valuable role in this regard.

³⁸ *Country Life*, 28 July 2008.

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Chapter 8

New challenges for Green Belt land

New challenges for Green Belt land

Introduction

This chapter looks at the new challenges to Green Belt land and seeks to address whether it is fit to meet these.

New challenges, new expectations

The land around our towns and cities is continually facing a range of challenges and conflicting land use priorities. Decisions involve weighing up a number of social, economic and environmental factors and include questions about the number of houses needed, the distribution of infrastructure, facilities and services; the amount of open space desirable to provide healthy lifestyles and quality of life; protection of important habitats, landscapes and historic features; and the provision of jobs and schools. With the passing of the Climate Change Act 2008³⁹, and a new overall statutory purpose for spatial planning to address climate change, this is an important factor to add to the list.

Green Belt policy has provided a framework for making some of these decisions around those towns and cities with the planning designation in place. It is a simple framework that assumes that urban areas need open space and breathing spaces around them – for that to happen, the form and size of urban areas should be contained. If not, urban development would sprawl and settlements would become too big and lose their historic character. The policy has defended against this successfully.

But there are new challenges in the 21st century, and new expectations. England's population has grown, and is projected to continue to grow. It is recognised that people benefit from having access to green spaces within a short distance from where they live⁴⁰. Quality places they can visit without driving or a long journey by public transport to get there will be in greater demand. Outdoor spaces that not only provide opportunities for exercise, relaxation or social activity, but which also provide a broad range of environmental benefits and ecosystem services. To tackle these challenges and expectations on England's finite area of land a multi-functional approach, combining different land uses in the same space, is required to plan and manage Green Belt.

Climate change mitigation and adaptation

The speed and scale of climate change requires action now⁴¹. The evidence that the Earth's climate is changing as a consequence of human activity is strong and accepted by an overwhelming majority of scientific opinion. The changing climate is beginning to have an impact on England's ecosystems and this impact is predicted to increase and accelerate in the future.

Responding to the challenge of climate change includes two distinct elements, usually referred to as mitigation and adaptation. Mitigation includes measures which reduce greenhouse gas concentrations

³⁹ http://www.opsi.gov.uk/acts/acts2008/ukpga_20080027_en_1

⁴⁰ Dr Richard Mitchel and Dr Frank Popham, Effect of exposure to natural environment on health inequalities: an observational population study, *The Lancet* Vol 372, Issue 9650, pp1655-1660

⁴¹ England biodiversity strategy climate change adaption principles, Defra, 2008

in the atmosphere. Land use and management can make a contribution to this, for example, by increasing the uptake of carbon dioxide by vegetation and the subsequent incorporation of carbon into the soil. Adaptation is the process of adjustment by which systems – both natural and human – are enabled to continue to function in a changed climate.

Research has shown that semi-natural and agricultural ecosystems can contribute to climate change mitigation, principally by increasing the amount of carbon stored in soils and trees. This depends on appropriate management but many of the measures that deliver an attractive landscape, such as planting trees and establishing or maintaining flower-rich meadows or wetlands, deliver climate change mitigation benefits. This has not been quantified for the Green Belt where there is almost certainly scope to develop mitigation benefits further.

Plants absorb carbon dioxide from the atmosphere and lock it away. The longer the plants live, the greater the amount of carbon is stored. Particularly valuable for carbon storage are mature woodland, standing grassland (such as meadows, green verges and lawns with well-developed root systems), areas densely planted with perennial plants and undisturbed peat. The amount of woodland in the Green Belt has been discussed in Chapter 7. In addition to this, the semi-natural grass (14% of the Green Belt area) and improved grassland (23% of the Green Belt area) present in the Green Belt are potentially vital resources for carbon storage (Table 1a).

Semi-natural ecosystems can also contribute to the adaptation of society to climate change. Hotter summers are predicted to cause an urban heat island effect for towns and cities leading to detrimental effects on air quality, summer electricity demand for air conditioning, and comfort in city buildings and transport networks. A recent study of Greater Manchester suggests that undeveloped Green Belt areas around the city have particularly high proportions of surfaces allowing evapotranspiration⁴² which can contribute to cooling urban areas⁴³.

Climate change is also expected to bring wetter winters and more extreme rainfall episodes⁴⁴, increasing flood risk. There is good evidence that wetlands within flood plains can reduce flood risk. They are also beneficial in maintaining water supplies through summer droughts – which are also likely to become more frequent in future.

Currently, in the Green Belt overall there is less land at risk of flood than other parts of England – 8% compared to 11% in both the Comparator Area and all England (Table 29). Oxford is the only Green Belt with a much higher risk (21%) and all others are close to or much lower than the average. However, the fundamental question is whether Green Belt has a role to play in reducing flood risk in the future in the nearby urban areas and whether it is equipped to do this.

Adapting conservation strategies to climate change has been the subject of much recent research and debate and guidelines have been published for conservation practitioners⁴⁵ and wider audiences under

⁴² Evapotranspiration is the the loss of water to the atomosphere by evaporation, or by transpiration through pores in the leaves of plants which can be substantial.

⁴³ Gill, S; Handley, J; Ennos, R; and Nolan, P: 'Planning for Green Infrastructure: Adapting to Climate Change', in Davoudi, S et al (ed): *Planning for Climate Change – Strategies for Mitigation and Adaptation for Spatial Planners*, Earthscan 2009, p.251-2.

⁴⁴ UKCP09 projections

⁴⁵ Hopkins et al, 2007

the England Biodiversity Strategy⁴⁶. These make clear the importance of taking a landscape scale approach to planning for climate change mitigation and ensuring integration across sectors.

Green Belt land has helped to maintain features that support the resilience of ecosystems to climate change and it offers the potential for further enhancement. Ways to increase resilience include ensuring that areas of semi-natural habitats are sufficiently large to support robust populations of species and to be topographically varied enough to provide a range of environmental conditions (such as microclimates and soil moisture). Connecting patches of habitat to create ecological networks is therefore likely to improve species resilience as well as providing avenues that enable species to move across the landscape and find new suitable habitat.

Food and the Green Belt

Growing concern about food security in the face of climate change, global population growth and rising prices poses an increasing challenge to the view that much or most of England's agricultural capacity is no longer needed⁴⁷. There has been an increasing interest in reducing transportation costs and distances involved in food production ('food miles'), as well as investing in land and skills to encourage good incomes for sustainable horticultural production, and ensuring access to fresh fruit and vegetables for deprived communities. For example, the Institute for Public Policy Research (IPPR), while not mentioning Green Belts directly, has recently stated strong support for planning policies protecting the best agricultural land, and called for 'more scope for the growing of fresh and perishable produce such as fruit and vegetables nearer to large centres of population'⁴⁸. In January 2010 the London Assembly issued a report which called for food growing to be recognised as 'one of the most beneficial uses of land in the Green Belt' (London Assembly 2010, p.54).

A number of local initiatives in the Green Belt are taking up this approach.

From the three areas CPRE surveyed for this report, examples include:

- **Manchester's Unicorn Grocery** buying land at Glazebury near St Helens in order to begin production in 2010⁴⁹;
- **Cleeve in the Avon Green Belt** to the south of Bristol where a farmer is launching a 'customer-grower' scheme encouraging members of the public to grow their own fruit and vegetables on his land in return for buying his meat produce⁵⁰;
- **The Colne Valley Regional Park** in the Green Belt to the west of London, has a Rural Development Forum promoting local food production in the park and linking 15 farmers in the area with local markets through events and box schemes.

Alongside this 'pick-your-own' farming schemes are available at a number of Green Belt Country Parks such as Avon Valley Country Park between Bath and Bristol.

⁴⁶ Smithers et al, 2008

⁴⁷ For the view that agricultural capacity is no longer needed see RTPI, Modernising Green Belts: A Discussion Paper, 2002.

⁴⁸ Midgely, J: Best Before – How the UK should respond to food policy challenges, IPPR North June 2008, p.15.

⁴⁹ Moggach, T: 'Supermarkets? No thanks', The Guardian, 10 December 2008.

⁵⁰ See *Bristol Evening Post*, 19 September 2008, 'Carrot Crunch – Grow your own on my farm'.

Towards a low carbon economy

To achieve a low carbon economy will require changes in lifestyle. These would need to include the way food and fibre are produced and distributed; the way energy is provided; and how services, leisure activities, education and business are arranged spatially to be accessible, thereby minimising carbon emitting journeys. Technology and communications can support this, for example by allowing people to travel less for work, but may also contribute to greater dependency on energy supply.

Green Belt offers opportunities to contribute to climate change mitigation and adaptation and to supporting a low carbon economy through:

- local food production, with potential to reduce unnecessary food miles, to develop more self sufficiency and food security;
- planting trees and maintaining grassland to sequester carbon, filter air pollution and absorb heat, particularly in outer suburban areas;
- local sport and recreation with opportunities within closer range of homes and businesses to enjoy the natural environment without a car journey;
- renewable energy supplies such as from biomass, anaerobic digesters, wood, solar, water or wind;
- creating and managing more wetland to help people adapt to and relax in a changing climate, as well as restoring the functions of natural flood plains to flood safely, protecting homes and businesses;
- creating ecological networks to help species adapt to climate change and maintain healthy ecosystems, by linking the land designated as Green Belt to areas designated for their environmental importance, urban green spaces and the wider countryside.

Value of Ecosystem Services

Improved understanding of the ecosystem services provided by the natural environment is helping to calculate the value of open spaces around towns and cities to maintaining a healthy environment and quality of life for people. This is particularly important in dealing with the consequences of climate change. This report shows how Green Belt land is contributing to a range of benefits to the environment and to society, and at the end of Chapter 1 the relationship between these benefits and ecosystem services is explained.

In Canada, an attempt has been made to put a monetary value on the ecosystems provided by the Ontario Green Belt around Toronto.

The value of England's Green Belt ecosystem services is a subject that would merit further investigation and the Ontario study can, at best, only provide an indication of the level of ecosystem benefits that England's Green Belts currently offer or could be made to offer in future.

Ontario has a population of 12-13 million, compared with England's 51 million. The much greater population of England is likely to be a factor in the much higher 'cultural' value that is attached to Green Belt land in England. The Barker Review of Land Use Planning cited a 2004 study for the Government which places the cultural value of Green Belt land at £889 per hectare (based in turn on a study in 1992⁵¹), far higher than the £90 (C\$138) per hectare quoted in the Ontario study.

⁵¹ Hanley, N. & Knight, J. (1992) Valuing the environment: Recent UK experience and an application to Green belt land, *Journal of environmental planning and management*, Vol. 35(2), pp 145-160

Ontario Green Belt

UN-HABITAT⁵² has identified Toronto in Canada as having one of the 10 most extensive areas of sprawl in the world. In 2005 the provincial government of Ontario established by Act of Parliament a Green Belt, covering an area of 760,240 ha around the city. It has similar policy aims and mechanisms to Green Belts in England. Since the establishment of the Ontario Green Belt, an active Friends organisation has carried out an extensive promotional drive to emphasise the benefits of protected countryside through such events as the 'Tour de Greenbelt'⁵³.

Ontario Green Belt Ecosystem Services

To assess the monetary value of the Ontario Green Belt, the ecosystems were assessed and a financial value attributed to them⁵⁴. Some 20 types of 'service' were considered including: fresh water; air quality; global and local climate regulation; eco-tourism and culture/heritage. The components of the valuations included carbon stored in soils and annual carbon uptake, alongside habitat for pollination, biological control, erosion control, soil formation, nutrient cycling, and 'cultural value'.

The Ontario study valued the overall benefits of such services at \$2.6 billion (approximately £1.5 billion) per year. The value per hectare of land was estimated to be the equivalent of £2,000. Of this overall total, the component of 'cultural value' (or the willingness of the public to pay for protection of the Green Belt expressed as a monetary value) was put at C\$138 per hectare (or approximately £90 based on exchange rates at the time of writing).

The Green Infrastructure Approach

'Green infrastructure'⁵⁵ has recently become embedded in planning for regions and sub-regions targeted for significant economic and physical growth. As areas that are particularly attractive for economic growth often tend to be those with Green Belt designations, the relationship between green infrastructure initiatives and Green Belt policy is significant. Green Belts provide important green infrastructure both around settlements but also within some towns, such as Walsall. However, to date, most existing green infrastructure approaches have been devised within an urban and urban-fringe context, as may be seen with the Greater Manchester example below. Green Belt land, by contrast, is mostly in agricultural production and issues such as access have to be reconciled with agricultural production and sustainable land management⁵⁶. At the same time the Green Belts are countryside in which the towns they surround have a particularly strong stake. As the Greater Manchester example below shows Green Belt policy provides (i) a crucial foundation for developing a range of green infrastructure initiatives as well as (ii) a potential location for new open spaces and linkages between them.

⁵² United Nations Human Settlements Programme (UN Habitat), *Planning Sustainable Cities: Global Report on Human Settlements*, October 2009. Summary available from: www.unhabitat.org.

⁵³ See www.greenbelt.ca/greenbelt/visit/tour-de-greenbelt-cycles-into-final-weekend-family-fun-and-fresh-local-food-expected, dated 25 September 2009, accessed 6 October 2009.

⁵⁴ David Suzuki Foundation, September 2008, *Ontario's Wealth, Canada's Future: Appreciating the Value of the Greenbelt's Eco-Services*.

⁵⁵ See the Executive Summary of this report for a definition of 'green infrastructure'.

⁵⁶ Gallent et al 2008, op cit.

Case study – Greater Manchester Green Infrastructure Framework

Natural England and the Greater Manchester Authorities have jointly prepared a framework for the emerging Manchester City region. The framework defines Green Infrastructure as “our outdoor natural environment”. More specifically it is a planned and managed network of natural environmental components and green spaces that connect city centres, towns and ‘rural fringe’ (in this case the Green Belt). The network includes open space, linkages (such as canals and cycle paths) and ‘urban green’ (such as pocket parks, verges and street trees).

Importantly the Framework starts from a basis that ‘asset-oriented policy and planning procedure’, including Green Belt policy, ‘is an essential tool in Green Infrastructure planning’. Due to its protected status Green Belt land, along with designated ecological sites and flood zones, will form the ‘skeleton’ of the Green Infrastructure Framework.

The Framework argues that a challenge for planning is to set standards and use spatial planning to address the following through multifunctional use of land:

- Flood management
- Climate change adaption;
- Ecological framework;
- Sustainable movement networks;
- Sense of place;
- Image and design quality;
- Urban regeneration;
- Health and enjoyment.

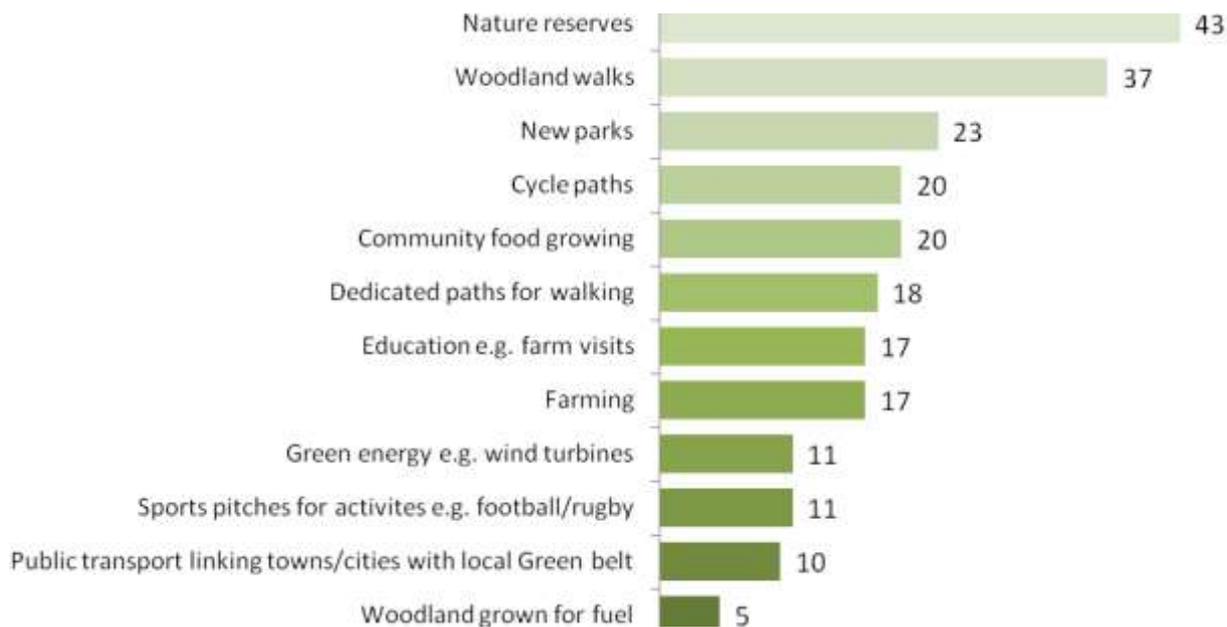
Public, land manager and professional views

The national survey for this study revealed a mixed public response to questions about whether the Green Belt could be used more for renewable or low carbon energy schemes. To the question: ‘**I would like to see the countryside around England’s towns and cities used to generate green energy**’ – 63% agreed, lower than the other value statements on nature conservation, quiet recreation and local food which scored between 78-80%. Only 11% of respondents wanted to see more green energy (hydro, biomass or wind turbines) in the Green Belt which made it the joint second least popular option from twelve (see Figure 36 below). The least popular was ‘woodland grown for fuel’ at just 5% (Figure 36). The relative unpopularity of specific green energy schemes was mirrored in the local surveys.

Making greater amounts of Green Belt land available for new renewable energy generation is likely to require a sensitive use of the planning process, involving developers, local authorities and communities in and around the Green Belt. The recent achievements of the Transition Towns movement and the ‘Go Zero’ campaign in Chew Magna, a village in the Avon Green Belt where a series of initiatives were organised to reduce energy usage amongst villagers, show that the potential exists to gain significant public support⁵⁷. It is likely though that this support will be dependent on continued protection of the Green Belt’s key characteristic of openness.

⁵⁷ Cookson R, ‘Chew Magna: Is this greenest village in Britain?’, *Independent* 6 March 2006. Accessed from www.independent.co.uk on 10 October 2009.

Figure 36 – Public views on changes to uses of Green Belt land



Summary

The role played by land designated as Green Belt, and indeed undeveloped countryside more generally, in helping to mitigate, and adapt to, climate change is only just beginning to be understood. The benefits these areas provide when left undeveloped or used for purposes such as agriculture or forestry are often un-recognised or taken for granted.

To maximise the benefits from ecosystem services, we need to use land to deliver multiple objectives with a Green Infrastructure approach at the heart of decisions about changing land use.

Can the Green Belt contribute to meeting the new challenge of climate change?

Undeveloped land, both in the Green Belt and the wider countryside, plays an important role in helping the nation prepare for a low carbon future and to tackle the impacts of climate change. This role should be explicitly acknowledged in planning policy, and policy levers used to drive the delivery of sustainable adaptation.



Chapter 9

Conclusions

Conclusions

This report shows that Green Belt policy continues to be highly effective in terms of its purposes of preventing urban sprawl and maintaining a clear physical distinction between town and country. Alongside this, fresh evidence has been presented on the benefits which Green Belt land is delivering and how these relate to the ecosystem services they provide. For example, it reveals that Green Belt land has a greater proportion of woodland and a more concentrated range of public access opportunities than other parts of England.

The thinking of both Natural England and CPRE has converged around the benefit to the general public of having land free from built development near major urban areas which delivers multiple objectives and a range of ecosystem services. Green infrastructure is important to the successful functioning of urban areas and the relationship to rural areas around them. The Green Belts already make a huge contribution to green infrastructure. With new challenges presented by climate change, along with additional pressure for new housing in the future, the Green Belts and all urban fringe land surrounding towns and cities could take on an even more significant role in providing an environmental resource for England's population. A multifunctional approach to land use is essential to combine the range of activities – such as production of local food, educational visits, access for recreation and provision of sustainable energy – that can be integrated with each other, and across as much land at the same time as possible.

This report does not reach any conclusions about which pattern of settlement development might be most effective at meeting the challenge of climate change. It does recognise, however, that land designated as Green Belt is already making a significant contribution to the ecosystem services that are essential to help mitigate against and adapt to climate change. The Green Belts can help to improve connectivity between the areas designated for their environmental importance, urban green spaces and the wider countryside, to form ecological networks and green recreation networks. Space is needed to provide these benefits and services and to date the Green Belt has been very successful at making sure that has happened. It is important not to lose sight of this contribution to the environment and to England's people.

In summary, we call for more ambition to enhance Green Belt land so that we can be proud to pass it on to the next generation. If everyone planning and managing the land works together then it will be capable of meeting the challenges of the future. Ideas on how to put this into practice are presented in the summary accompanying this evidence report.